

**WILDERNESS MANAGEMENT:
PROBLEM OF SURVIVAL OF A RESOURCE**

**THE WEST COAST TRAIL: A QUALITATIVE
APPROACH TO THE EVALUATION
OF RECREATION**

WILDERNESS MANAGEMENT:
PROBLEM OF SURVIVAL OF A RESOURCE

by

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ABSTRACT

Wilderness, like other resources, is perceived through changing and complex cultural processes. This paper is concerned to see how two conflicting demands presently made of this resource may be resolved. These two demands are that people wish to use the wilderness for recreation, yet they desire that the land should remain unchanged in its wilderness state. As demand for use of this resource for recreation increases, it is clear that use may be getting too great and, unless management steps in, may threaten the demand that wilderness remain unchanged. One or other demand may have to be sacrificed.

It is necessary that objectives be set for management by observing how those who use the resource perceive it and wish it to be used. Generally the desire of these people is to see wilderness areas kept in their natural state with minimal impact and alteration by man. This is a demand for wilderness to be managed on its own ecological terms, which will mean restrictions on both the behaviour and the numbers of users, and only minimal manipulation of the land itself. Unless such restrictions occur, wilderness, as most of its users want it, will be destroyed effectively for ever, since once destroyed it cannot be recreated. In this paper it is suggested that since wilderness recreation is a resource-oriented activity, the demands of the resource should take precedence over demands of large numbers of people to use it. In little used

areas few or no restrictions may be needed. But as popularity of an area increases, restrictions on users will also have to increase to protect the resource. Initially it will be necessary to reduce types of activity which are more ecologically damaging than others and are not able to co-exist compatibly with others. Such management procedures should be successful in most areas for a long while to come. Nevertheless, in the future, as demand for use continues to rise, the ultimate management input will be imperative: rationing of use in order to preserve the resource its users desire.

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TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	iii
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
INTRODUCTION	1
Outdoor recreation planning objectives	1
WILDERNESS RECREATION	4
Definition of wilderness	4
Characteristics of wilderness land	6
Other uses of wilderness	8
Goals for wilderness recreation lands	9
Wilderness management	12
Policies to manage the land	15
Policies to manage the users	20
CONCLUSION	33
BIBLIOGRAPHY	35

INTRODUCTION

The purpose of this paper is to discuss objectives which are suggested for consideration in the management of wilderness lands for recreational use and methods of ensuring these are realised. These objectives will be analysed in the general context of current philosophies of resource management.

Although attention will be focussed on wilderness forms of recreation, sight must not be lost of other types of recreational lands, for it is felt to be impossible to consider requirements of one taste in isolation from all the others. Hence it will be important to consider initially some major general recreation planning objectives and observe certain conflicts which arise to prevent complete realisation of these. It will then be necessary to define the resource of wilderness; to recognise certain important ecological characteristics and human values of true wilderness; and to consider objectives for managing this resource for recreational purposes. Finally, in the face of large increases in demand, the choice of managerial alternatives which may be implemented to ensure that the objectives for the resource are attained, will be discussed.

Outdoor recreation planning objectives

Three major objectives of general recreation planning may be suggested as follows. Firstly, output from recreation lands should attempt to provide for every variety of recreational demand. This should include quality of experience as an important aspect of variety. It does not

mean that every type of recreational demand need be supplied by the same organisation. Secondly provision of recreational opportunities should be made to accommodate as many people as demand them. Thirdly management must accept responsibility for safeguarding lands used against ecological damage in order to perpetuate their inherent recreational values for the future.

It will not be possible to maximise all of these objectives, but rather conflicts between them will arise and priorities may need to be chosen and compromises made according to these priorities. That it is becoming increasingly necessary to choose among these objectives will become evident during the paper. At this point account will be taken of the major conflict which threatens the very survival of wilderness as well as being crucial for other recreation lands. That is the decision to use land for short term recreational benefits as opposed to preserving land for future well being. This conflict is built into legislation affecting Canadian national parks which are "dedicated to the people of Canada for their benefit, education and enjoyment and [which] shall be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations" (National Parks Branch, 1956, Section 4). The National & Historic Parks Branch (1969, p. 4) recognises this conflicting situation, and is prepared to take upon itself the onus of preventing

overuse of lands held in their jurisdiction (e.g. National & Historic Parks Branch, 1970, p. 7). The Wilderness Act of the United States is less vague than Canadian legislation in that it does state a priority. It provides for preservation of the wilderness resource of federally controlled wilderness areas and for primitive forms of recreation, but only to the extent that such recreation does not impair or jeopardise preservation of the wilderness resource (Wilderness Act, Sections 1-4 and Hendee, 1970). However, in both cases managers' interpretation of "overuse" is of major significance. Clearly, important value judgements are being demanded of the recreation land manager.

The viewpoint put forward in this paper is that the objective of perpetuating values for the future ought to take precedence over other competing objectives if it is necessary to make a choice. Considerations of the land should be taken over and above the immediate considerations of the people. If current resource management theory emphasises ethics over economics and ecology over engineering (O'Riordan, 1971, p. 23) then lands which are extensively used for recreation should be managed with a land ethic. This ethic must recognise a right of land to have first consideration to exist and be managed on its own ecological terms (Leopold, 1949, Part IV).

The other objectives may, for a given geographic area,

be met only if we provide a spectrum of opportunities that meets the diverse and conflicting tastes of the public (Lime and Stankey, 1971). This is a demand for multiple use of recreation lands, and indeed a multiple use of the whole public domain. It must be stressed that the term "multiple use" here does not mean multiple use of every acre of land, but of the public domain as a whole. It will be equally as important to zone within recreational lands as between recreational and other uses of public lands.

WILDERNESS RECREATION

Definition of wilderness

That resources are culturally perceived as useful and not physically determined (Lucas, 1964, 1965; Lowenthal, 1961, 1962) becomes particularly noticeable when any study of wilderness is made. Perception of this resource has altered radically over time and in different cultural settings, as demonstrated by Nash (1967) and Tuan (1971), but even in the current period and in the relative homogeneity of North American culture it is not easy to find a suitable definition of wilderness as a recreational resource which may be used as a base. Different and often conflicting values abound.

Nash (1967, p.1) states:

"wilderness" has a deceptive concreteness at first glance. The difficulty is that while the word is a noun it acts like an adjective. There is no specific material object that is wilderness. The term designates a quality (as the "-ness" suggests) that produces a certain mood

or feeling in a given individual and, as a consequence, may be assigned by that person to a specific place. Because of this subjectivity a universally acceptable definition of wilderness is elusive Wilderness, in short, is so heavily freighted with meaning of a personal, symbolic, and changing kind as to resist easy definition."

Spurr (1966, p. 8) suggests:

"the wilderness exists, but as a sociological rather than as an ecological phenomenon. It is what we as humans, both individually and collectively, imagine it to be."

These comments serve a useful purpose in showing the elusiveness of the resource with which we are dealing and to introduce some of the consequent problems to be analysed. However, they get no nearer to providing a workable definition.

Hendee (1970) narrows down the various conceptions of wilderness and wildlands from those legislatively defined as such in the United States, undeveloped areas of national parks, local woodlands, city parks and roadside rests to those which he concentrates on in a discussion of recreational values, use and management of natural areas: "remote natural areas of wildlands relatively insulated from civilisation."

The definition of wilderness in the Wilderness Act of the United States (Section 1.c.) states:

"a wilderness, in contrast with those areas where man and his works dominate the landscape, is recognised as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."

This is taken to mean that in such areas man's impact has always been light and is intended to remain that way. Any user must never get the feeling that such land is over-used. While realising even this is open to question and different interpretation, it will be used as a definition of true wilderness to be borne in mind when considering objectives and management alternatives for utilising this resource.

Characteristics of wilderness land

There are certain special characteristics of true wilderness which need to be discussed in order to maintain the management objective of preserving a land ethic and to manage the land on its own terms. If it is land 'untrammelled by man' then it is seriously affected by irreversible decisions for once a decision is made to change or alter it in any way then it will be destroyed effectively forever. It may be possible, after a considerable period from the time of such a change, that land would revert to a semi-natural state. Such land would have important recreational value, even of a wilderness type, but it would not again ever be true wilderness land. In order to use it at all, we have to compromise on the word 'untrammelled'.

Wilderness is an ecologically fragile resource. In its natural state it is in some sort of ecological steady state balance, but sometimes an apparently small management intrusion may have serious ecological consequences. Real wilderness is

a quality of land which may not be wholly replaced by any other sort of land to provide quite the same values, either ecologically or psychologically to those who use or value it (Sigund, 1966; Krutilla, 1967, p. 783).

The final point to be mentioned at this juncture is the size such areas have to be to qualify for the appellation of wilderness. Writers seem generally agreed that such areas must be large, but there are few statements or recommendations of a precise nature. Those that are made vary wildly. Areas must be large enough to provide an ecologically viable unit, such as a watershed and, if they are to be used for recreational purposes, they must be large enough to give a sufficient feeling of remoteness. This last is very difficult to define, for Lucas (1964) found that perception varied widely between different individual wilderness users on this point. The Canadian Society of Wildlife and Fishery Biologists does not specify an exact size, but suggests they should be large enough to necessitate at least a two day trip to cross them by conventional wilderness travel methods (quoted in Pimlott & Litteljohn, 1971, p. 14). The United States Wilderness Act (Section 1.c.3) states that wilderness areas should have at least 5000 acres or should be "of sufficient size as to make practicable [their] preservation and use in an unimpaired condition". Leopold (1921) proposed that areas of over 500,000 acres should be set aside. It is

also necessary that buffer zones be created around these areas to act as transition zones from the cultivated to the truly wild lands. These would not only act as a suitable safeguard, but for many would provide a satisfactory "wild" experience reducing pressures on the true wilderness (Lucas, 1964, p. 409).

Other uses of wilderness

It is necessary to mention briefly that recreation, however managed, is not always compatible with other perceived uses of wilderness. Such uses may include scientific research (Kruckeberg, 1970), preservation as wildlife reserves (e.g. Notornis bird reservation in Otago, New Zealand, where a close prohibited zone of 434,000 acres has been established (Fisher et al, 1967, p. 233)), or as option values for the future (McTaggart-Cowan, 1968). These uses are important for human reasons other than recreational ones, and they are also important for ecological reasons if such can be preserved only by totally banning all human entrance. But if these uses cannot include man's recreational pursuits, in this paper such uses of wilderness need only be considered one of the multiple uses of the public domain and not considered further. The Canadian National & Historic Parks Branch (1970, p. 4) recognises the incompatibility of certain recreational activities and other important land uses of national parks in its designation of "special areas" in its system of land use zones in the parks. Such activities are banned from

these areas.

Goals for wilderness recreation lands

The position has now been reached where goals for wilderness recreation management may be analysed. There is a growing literature concerning characteristics and perceptions of wilderness users. The majority mentions the words 'wilderness experience' as being the major benefit that users obtain from recreating in these lands. 'Wilderness', as we have already noted, conjures up different meanings for every individual, and it would seem that 'wilderness experience' does as well, for the concept is equally emotional in content. It may vary from being an intense spiritual experience and uplift of the Romantic kind for some, while for others it may be just an opportunity to 'get away from it all' (Zahniser, 1963). It is unnecessary to consider this here except in general terms. If the experience varies with the individual, as managers we cannot set up any chart for dissecting the anatomy of wildland experiences (Carhart, 1961, p. 35). Rather management may provide the conditions under which a recreationist may be able to enjoy such an experience on his own terms, mental capabilities and definitions. Hence it becomes necessary to study the conditions which recreationists seek in wilderness.

In a study of wilderness users in three areas of the Pacific Northwest of the United States, Hendee et al (1968) asked interviewees to rank each of sixty factors on a

graduated scale to indicate their relative acceptance or rejection to finding or experiencing them in wilderness. It was discovered (p. 25) that factors such as camping (backpacking), tranquility, sleeping outdoors, hiking, solitude, enjoyment of nature, awareness of beauty, alpine meadows, absence of man-made features and other features to be experienced in a natural environment ranked high on the positive end of the scale with all wilderness users. At the other end of the scale indicating strong rejection were: developed resort facilities, campgrounds with plumbing, power boating, automobile touring, equipped bathing beaches, camping with car, purchasing souvenirs, private cottages, gravel roads and other features associated with a more developed environment.

Responses to these same questions were used to rank wilderness users on a 'wildernism-urbanism' scale. The questionnaire items were so arranged that individual responses could be cumulatively scored, the total score indicating the relative degree to which respondents were wilderness-purist (wildernist) or urban-oriented (urbanist). It was found (p. 32) that wildernists are best differentiated from urbanists in terms of their more positive affinity for natural environments devoid of human influence. Specifically it was found the more wildernist respondents expressed more zeal than urbanists, all of whom were using the wilderness areas, for tranquility, solitude, alpine meadows, absence of

man-made features, virgin forest, lakes (natural), timberline vegetation, vast areas and enormous vistas, rugged topography, and native wild animals. They were more averse than urbanists to camps for organisations, gravel roads, private cottages, purchasing souvenirs, camping (with car), equipped bathing beaches, automobile touring, power-boating, campsites with plumbing and developed resort facilities. Moreover the study concluded that these more wildernist respondents appeared more willing to adapt themselves to natural environment conditions, as indicated by their general endorsement of camping (back-packing), sleeping outdoors, and hiking.

In order to maintain the goal of preserving a land ethic and maintaining maximum recreational value for the future, much more consideration should be given to the wildernist demands and perceptions than to the more urbanist requirements of some other wilderness users. This is because these users are more prepared to adapt to the natural environment than expecting the natural environment to be adapted to them.

The goal of wilderness recreation land managers should be the sustained production of the conditions which are conducive to the obtaining of a quality experience, of their own definition, by as many recreationists as would like to enjoy it. However, this must be consistent with maintaining the land as wilderness according to the definition given above.

The major conflict which arises from these management

objectives is the requirement of providing wilderness for as many recreationists as would like to enjoy it. It is obvious that land for wilderness recreation is seriously limited in quantity by demand for other sorts of recreation and other land uses generally. Wilderness recreation is a very extensive land use, and demand for all types of recreation is increasing rapidly, as population, incomes and leisure all continue to rise (Clawson and Knetsch, 1966, Chapter 6). The Outdoor Recreation Resources Review Commission report (1962, No. 3, p. 236) warns that by the year 2000 demand for this facility will have increased eight-fold in the United States from the year the report was written. There seems little reason to doubt that similar increases may be expected in Canada. Indeed, between 1965 and 1967 the number of registered parties using back-country areas of Banff National Park, to give but one Canadian example, almost tripled from 650 to 1700 (Nelson, 1968, p. 64). As American wilderness becomes more crowded it is likely that more Americans will come to swell these already increasing numbers of users of our own wilderness in Canada.

Wilderness management

These large potential increases in demand for wilderness recreation pose considerable problems for wilderness managers. But if wilderness goals as set out above, and indeed if any semblance of wilderness at all is ever to remain in North America, management policies to sustain these goals must be

very strong in order to be effective.

In more popular areas which once provided a viable wilderness experience, management has often done nothing or very little to protect them against huge increases in visitation rates. Instead it has sought only to accommodate increased demand with an inevitable reduction of quality of recreational experience and irreparable damage to the land and ecology (Snyder, 1966).

There are three major reasons for this position. The first is that the purpose of many recreation areas has not been clearly defined, no goals have been stated for the various areas, and hence management has frequently been powerless to resist the tide. Use has come to dominate policy instead of the more desirable vice versa. Hendee and Mills (1968) warn against this problem.

The second reason is that benefits of recreation have been measured in terms of total numbers, rather than by the quality of an individual's experience. This has had the obvious effect of encouraging vigorous advertising programmes on the part of authorities. Vastly increasing numbers of visitors have resulted which have tended to cause the destruction of some former wilderness areas. Scathing attacks on this kind of policy and this method of evaluating benefits of recreation have been made by Carhart (1961) and Leopold (1949).

The third reason is that to do nothing is by far the easiest way out of the immediate problem since the management

alternatives are not easy to effect. But without them there is an inevitable lowering of an individual's satisfaction and a gradual reduction of all outdoor recreation areas to a fairly general lowest common denominator of homogeneity.

There are a number of policies that may be instituted when control becomes necessary which need to be discussed. There are two major alternatives open to a manager to sustain capacity and quality: firstly, to manage users indirectly by managing the land; and secondly, to manage the people directly who use the land. There are various ways of implementing each of these ideas. They may be put into effect, singly or jointly according to the particular needs of the area in question, either to increase capacity while still maintaining quality, or they may be used to limit numbers if it is not possible to increase the one without reducing the other.

Care must be taken in any management decision, to restate wilderness management objectives, (a) not to damage the land, the major consideration, and (b) not to spoil the experience we are trying to preserve by too many restrictions on behaviour, since it is precisely these restrictions that wilderness users wish to escape. Any policy involving controls of this latter kind must be tested to see both how effective it will be for the purpose it is instituted, and also to see how well it will be received by the users (Hendee and Harris, 1970). Burke (1969) writes of the traditions which have grown up over very long periods in the management of certain types

of land of the older settled parts of the world and which continue into the present despite other revolutionary changes. He suggests that present wilderness managers may be fixing traditions for the management of wilderness recreation areas. Therefore, he considers it wise that the following question should be asked of any policy that is instituted (p. 9): "If the decision I am making today becomes a precedent for wilderness management tomorrow, what will be the result in 900 years time?"

Policies to manage the land

There are six such ideas that should be considered, four to increase the capacity of the land to provide a quality experience for more people, and two to limit numbers of visitors.

1. The first of these is to establish a constant programme to clean up and to keep clean the areas that are presently used. It is unfortunate that those who apparently seek pristine natural areas are inconsistent in their ideals and their behaviour and have a tendency to leave garbage behind in such areas with a consequent decreased quality of experience for others who follow after them (Brockman, 1959, p. 213). This is one policy that management has already largely undertaken, to maintain and even increase both quality and capacity of wildland areas. Such action can only have a beneficial effect on the experience of all visitors.

2. The second alternative is to zone areas of wilderness. One idea is to separate incompatible recreational uses from each other (Carhart, 1961, pp. 21-23). Particularly important is to separate those who use their own powers for transport from those who use motorised transport. This idea obviously involves both management of the land into areas, and also the manipulation of users' behaviour directly by prohibiting certain uses in certain areas. It is important to effect this separation, for Lucas (1964, pp. 405-406) has shown that motor boatists do not mind meeting other canoeists, but that the reverse is not the case. The United States Forest Service already has some such zoning in the Boundary Waters Canoe Area to restrict motor-propelled craft from certain areas (USDA Forest Service Handbook, Boundary Waters Canoe Area, 1969, quoted in Stankey, 1971, p. 206).

Another idea is to zone areas of decreasing use from outer zones to inner and more remote zones. This must be by managing lands which are large enough that this will happen automatically without further restrictions than relying on the remoteness of areas to keep use down. This is largely the present situation in most wilderness areas. However, often such zones of remoteness are being destroyed by the development of roads for other purposes. The policy guideline to be used for road development in Canadian national parks states:

"The location, design and construction of park roads must keep impairment of the landscape to an absolute minimum and avoid interference with special park

features. The extent of the park road system should conform to the zoning plan prepared for each park." (National & Historic Parks Branch, 1969, p. 7).

It seems that plans for the development of the Rocky Mountain Parks (National & Historic Parks Branch, 1970) which would set a precedent for all the national parks in this country, were not keeping within these guidelines (Nelson et al, 1972). Although no decision has yet been made public by the Parks Branch, public opposition to these plans has been so great that most of the proposals to expand the road systems will probably be abandoned (Parks for Tomorrow, June 1971). The wilderness areas will remain remote for the time being.

However, even without such road development, in time the idea will not be sufficient to protect even the remotest areas from increased visitation and use, without other management input.

3. If there are other areas available for wilderness recreational use they may be promoted to relieve the pressures on more popular areas. This assumes both that other areas are available for such promotion, and also that it is advisable to encourage people to go there.

4. It may be possible to implement certain management inputs directly on the land to increase capacity. For example, it may be possible to build more trails and erect more signs to redistribute use and diffuse it over wider areas

than at present. This is to distribute use more evenly over areas that are already given over to wilderness recreation. On the other hand, if the use of trails has not been common in an area, it may be desirable to build trails and encourage users to keep to them in order that areas not on the trails may be protected from damage. In other words, by encouraging travel along the maintained areas, it may be possible to reduce damage to the whole area very considerably. In the case of the decision to build more trails, care must be taken that in doing so other wilderness values of wildlife and other aspects of the ecology are not harmed. Where such trails are built to concentrate use where formerly it was very diffused, care must be taken to evaluate the effect of this policy on the individual.

Whatever the result of these studies and policies in individual cases, they can be successful only for a limited time, if at all. Given present administrative constraints, as well as the basically negative attitude of visitors, especially strong purists, towards physical modifications, it seems unlikely that managerial inputs represent a method of appreciably enhancing capacity (Stankey, 1971, pp. 232-233). It is also very doubtful if such methods can be implemented without seriously affecting the ecology of the lands managed. It therefore becomes necessary to consider methods of reducing the use of wilderness areas. Wagar (1964, p. 12) toyed with this idea when writing of the carrying capacity of wildlands

for recreation: "'carrying capacity' implies that use will have to be limited, but mounting visitor pressures make this a distasteful course of action." So they do, but the alternative of an ever decreasing quality is still worse. Clawson and Knetsch (1966, p. 177) are more prepared to face this problem: "the most serious problems [facing recreation land managers] arise over how recreation use may be limited in some areas, not over whether it should be limited." Two methods considered under this section involve making the wilderness more difficult and attempting to reduce visitation rates by demanding more of the users in terms of physical effort. Other ways of limiting use which are more obvious to the user will be considered in the next section.

5. It may be possible to reduce use in areas that were formerly fairly well managed, by abandoning management of trails and any other facilities that may have been provided. Such facilities, making wilderness 'easy', will have the effect of increasing demand; by removing them again it may be possible to reduce demand to somewhere near former numbers which may be assimilated into the land more easily. This is in opposition to the idea of building more trails to reduce damage by more widespread diffusion over the land. If it is only possible to penetrate the wilderness where some sort of clearing has been made, then the idea may have some success by the trails' becoming extremely difficult to negotiate because of mud and other awkward conditions. However, if it is easy

to move off the trails and diffuse more widely in an area where vegetation is thin, then damage resulting from such a policy may be greater than if it were not put into practice at all.

6. Probably a slightly more effective way of making the wilderness more difficult is to cut roads off at some distance from the end of the wilderness trails, thus necessitating some considerable extra walk by users. It is largely a result of the fact that roads have not yet penetrated every area of the continent that some areas of wilderness still exist for recreation. If this difficulty of access is increased again it may have the effect of increasing the area of wilderness and reducing, at least temporarily, the number of visitors. Hendee and Mills(1968) make the suggestion for one particularly vulnerable and delicate area of wilderness in the Cascade Mountains of Washington that a policy of giving no access at all may keep use within manageable numbers for many years yet without any other controls being necessary.

Policies to manage the users

These measures will necessarily be combined with policies of managing the land to indirectly manage the people. But as other measures are no longer effectual, more stringent methods of control will become the only alternatives left to stem the tide of visitors and to maintain any wilderness at all for future use. The less stringent methods will be considered first.

1. One of the most important management policies is to set up educational channels to alter certain depreciative behavioural patterns of some wilderness users. Such behaviour includes problems of litter, already mentioned, excessive noise making, use and destruction of vegetation for bedding and firewood (Brockman, 1959, pp. 213-214). Such depreciative behaviour may be intentional, or it may be because those committing it do not know any better. If it is for the latter reason then educational programmes should have a beneficial result. Such programmes should be instituted to aid the effectiveness of any other behavioural controls that may become necessary, by showing visitors the reasons for such controls (Hendee et al, 1968, p. 39). However, for those who do these things intentionally, it will have to be necessary to have a system of sanctions and fines. It has already become necessary to do this in the Superior Wilderness Area of the United States. In this area all food containers are required to be combustible, anyone found not to comply with this being liable to a fine (Port Angeles Evening News, June 21, 1971). Hendee and Mills (1968) make the comment that at some time it will be necessary to have controls on cutting firewood, so they may as well be imposed now while there are still some trees left to protect in the more sparsely forested areas! Reliance will have to be placed on educational programmes and the threat of fines and other sanctions rather than in their actual imposition, as it is very difficult for

authorities to apprehend culprits in a sparsely used wilderness area. Snyder (1966) suggests that there should be commonly agreed rules for behaviour that can apply to all areas. As an example he states the confusion of being told to bury garbage in some areas, and in others not to do so, but rather to pack it all out. With such conflicting advice people are uncertain what they should do.

2. Methods of transport may be totally restricted as a means of increasing capacity. Zoning areas for mechanical and non-mechanical transport modes has already been suggested, but this may have to be strengthened to a total ban on all mechanised transportation. This is already prohibited in areas of Canadian national parks zoned as 'special areas' and as 'wilderness recreation areas' (National & Historic Parks Branch, 1970, p. 4), and in official wilderness areas of the United States protected by the Wilderness Act (Section 4.c.). This measure should be effected in other wilderness type areas not protected by these governments. Because of their much faster travel, people using these methods of transport need a much greater area of land than those who are using non-mechanical methods (Lucas, 1964). Such mechanical transportation is a travesty of wilderness values, and should be provided for on land that is outside true wilderness. J.B. Harkin, the first executive of the Canadian National Parks Branch (quoted in National & Historic Parks Branch, 1957, p. 13) suggested that those who penetrate the national parks

on foot or horseback enjoy an experience which those who whizz through them in cars can never know. This statement could be extended to include other related methods of transport. It is neither possible nor desirable that restrictions of this sort should apply to all areas of national parks, but it is desirable to apply them to all those areas, within the parks or not, that presently provide a chance for wilderness recreation of the type being discussed in this paper. Hendee and Mills (1968), writing of the desirability of banning private aircraft flight into any wilderness area, say that it is very distressing to those who have hiked in long distances to find that others have just dropped in! Beside that, they also suggest that such people tend to leave more garbage behind them than more conventional users, so the result of such visiting lasts even longer.

Not only mechanised transport has been banned, but in at least one wilderness area of the United States the use of horses is also prohibited, since one horse causes more damage to trails than a much larger number of backpackers (USDA Forest Service, Pamphlet No. GPO 998-826 - no date). Ferguson (1966) suggests that those groups with pack-horses also tend to leave more garbage behind. If such a measure would increase capacity very significantly, then it should probably be implemented, but it will obviously have the effect of removing the chance for one form of recreation from the total, thus conflicting with the stated recreation management objective of

providing for the greatest variety of activities possible.

3. Less drastic, and hence more desirable, is to limit the number of horses in any one party. Ten parties of three horses over a two month period are much less damaging to trails and campsites than if all thirty horses were to go as a single group (Lime and Stankey, 1971). It may also be useful to limit the party size of human visitors as well as the animals they may use. McTaggart-Cowan (1968) suggests that destruction of the elements that are distinctively wilderness increases as the square of group size.

4. Issuance of a wilderness licence, and requisition that all users, or at least the heads of parties, have such a licence could be a very effective measure to control certain sorts of behaviour. To obtain a licence it would be necessary to pass certain tests of wilderness behaviour and certain physical tests, much like the obtaining of a driver's or hunter's licence (Hardin, 1969). This would greatly help the efficacy and diffusion of the education programmes. A system of demerit points may be considered as an incentive to keeping a good record, much like the way most provinces deal with driving offences, with the risk of fine and ultimate suspension or revocation of the licence.

Lime and Stankey (1971, p. 182) discuss the acceptability of a wilderness licence:

"While these actions of management are regulatory to a point, they do not interfere directly with the

recreationists' freedom of choice. Once he has demonstrated his ability, a person is essentially free to do as he pleases consistent with certain rules of safety [and conduct]."

However, the necessity of having a licence to enter wilderness may be a travesty of the idea of wilderness recreation as a chance to escape from the trappings of modern life. Systems of disseminating material from educational programmes through visitor centres and other media should be at least as effective and much less officious.

All the management procedures so far considered have been concerned either to increase capacity, which may well only redistribute the problem of overuse, or dilute it, or reduce use in a relatively passive manner. However, any of these which will aid the goal of providing wilderness for as many people as possible within the goal of not damaging the resource or the quality of the experience of the individual will be very valuable management input. They may well be all that is needed to control use in many areas for some time to come. However, in the more accessible and the generally more popular areas it is already necessary to consider yet more methods of control. It will eventually become necessary in most wilderness areas to institute much more active policies to redistribute use, and limit overall use from the potential demand. Measures to do both of these may be considered together.

5. Hardin (1969) takes a very hard line approach and suggests that people should only be allowed into wilderness areas on physical merit. Only those who are physically

vigorous must be allowed in and they must pay the price of carrying their equipment and walking. He suggests that there should be no rescue services, since there should be no public interest in making wilderness safe; rather it should be made as difficult as possible to enable us to escape entirely from our fenced-in lives. He states that only the things that are earned can be precious, and consequently those who cannot be expected to earn them because of physical incapacities should be excluded. However, it would be irresponsible, if it were considered desirable to remove rescue services, not to make the changed situation well known. Having done so it should be left up to the individual to decide whether he is physically capable or not of making the trip in wilderness on those conditions. This measure, however, would seem unlikely to receive much public support, though there is no evidence to the contrary. Nor would it be likely to make a great deal of difference to the numbers of visitors if it did, since presumably those who enter wilderness now are unlikely to be poor physical specimens, considering the demands of the wilderness and the physical efforts people say they wish to expend (see pp. 9-10).

6. A system of ration cards and points has been suggested (Held, Brickler and Wilcox, 1969, quoted in Stankey, 1971, p. 183). Under such a system any individual would be allotted a certain definite number of points, the same for everyone. A visit to a popular area would cost more points than to a less popular place if it were considered desirable to redistribute

use in such a way to these less popular places. More points would be required as the stay became longer. Such a system may be useful for redistributing use, and in allowing any person only a limited number of trips a year. It would be a useful device to redistribute use over time as well as place, as it would be possible to charge less points during off-peak times. The major disadvantage would be that it may not be necessary to limit the number of visits of any one individual, rather only the number of visitors in any one area. But unless an absolute number of points is allotted, the system cannot work as the incentive to economise on points would be gone. The system may have some potential if the number of points to visit popular places and at peak time is set very high, but may have the unnecessary result of limiting the absolute number of visits per individual.

7. Differential fee structures may also be set up to achieve a similar purpose of redistribution and limitation of use (McCurdy, 1970). However, a fee system is generally considered in an unpleasant light because of the socially unpopular nature of charging fees for the use of public lands. It is probably the least desirable of any mechanism for manipulating use.

8. A first-come, first-serve system of allotment is currently in operation for the majority of campsites of both

national and provincial parks of Canada. When a question of not exceeding holding capacity is involved, whether this is applied to wilderness or developed campgrounds, the major disadvantage of this system is that many of those who have arrived too late to get in, but who have come from a long way, may have no opportunity to go elsewhere. Instead they can only attempt to make room for themselves to the discomfort of others. The major benefit of this system, if it is rigidly applied, and the gates are closed when the area is considered full, is that it still allows for a spontaneous decision to engage in recreation for those who obtain entrance. It does not demand much pre-planning, except the necessity of arriving early enough to get in.

9. Allocation by means of a lottery seems to have few attributes to recommend it. It requires prior-planning, but then guarantees no one entry, no matter how well or how far in advance they may have planned. When the lottery is made is crucial to allow time for alternative plans to be made in case of failure of the first choice.

10. The system with the most to offer would seem to be a reservation system, reservations to be made before the visit by mail or phone. It would be possible to state more than one option at the time of application, in order to stand the chance of success at least somewhere. The system requires that people pre-plan their activities, but this is a small compromise to make on the part of the recreationists in order to gain a

worthwhile experience in the relative solitude and unspoilt land that most wilderness recreationists require (see pp. 10-11 above).

This system is advanced here as the fairest single method of rationing use when it becomes necessary to do so. It should be introduced gradually, starting with the most popular areas which are already overcrowded and overused, and then increased to include others as these become crowded due to the redistribution and general overall increase in demand. As with any system there is bound to be a certain amount of abuse, but hopefully this can be kept to a minimum by watchful management. Such a reservation system is already in effect in some of the largest state parks of Oregon (Lime and Stankey, 1971), and is reported to be working successfully. The beginnings of it can be seen in the national forest wilderness and primitive areas of California. In order to obtain entry to any of these areas it is now necessary to obtain a permit beforehand. At present it is stressed that the number of such permits is not limited, but this may be seen as the thin end of the wedge for reservations by getting the public used to the idea of planning in advance (USDA Forest Service pamphlet No. GPO-980-697 - no date).

It may be possible to overcome the problem of requiring that everyone pre-plan their activities, by allowing a compromise. It should be possible to allot a certain percentage of places by reservations, and the rest by first-come, first-

serve. Such a compromise would allow those who come from a long distance not to be disadvantaged by those who come from nearby, while not denying spontaneity to these latter people.

Stankey (1971, pp. 194-195) has attempted to test how such ideas would be received by wilderness recreationists. His conclusions were that a lottery system was held in very low esteem, only 18% of his sample being in favour or neutral. This was followed by the first-come system of allocation, 46% of his sample being in favour or neutral towards such a system. The reservation system had 60% support. However, he found that those living near a facility preferred a first-come system, while those from some distance away tended to prefer a reservation system. A compromise between the two methods, as suggested above, would appear to satisfy by far the majority of recreationists.

It is also interesting to note Stankey's results to a question in which he asked recreationists if there should be any restrictions on how many people can be in a wilderness area at any one time (Stankey, 1971, p. 186). He found that 13.9% strongly disagreed, 24.4% disagreed, 25% were neutral, 30.6% agreed and 6.1% strongly agreed. Despite these figures the numbers disagreeing with the idea, were it implemented, would probably be higher as individuals found it affected them directly. Obviously education programmes will be necessary to show the need for restrictions when use becomes too heavy for the land to sustain without them. Public

policy must be ahead of popular consensus, which is often confused, even when informed action is crucial (Fraser Darling, 1967).

Whichever system is decided upon, reservation, first-come, or a compromise of both, points to two important factors. One of these is the importance of far more studies being made on problems of capacity, and the second is that wilderness recreation areas cannot be planned in a vacuum, there is a need to plan all types of recreation areas systematically.

Capacity studies need to be made to determine how many people should be allowed into each area. In a theatre, a hotel or a developed campground capacity is easily defined by the number of seats, beds or campsites available. However, with regard to wilderness, determination of absolute numbers to fill capacity is less easy. Attention must be given to how numbers affect the land and ecology which will vary in each area, and thought must be given to how different numbers of people interacting will affect the quality of their experience (Stankey, 1971, Chapters 4 & 6). It seems likely that this will vary less, areally, than ecological demands. But, whether it does or not, it must again be stressed that the major goal should be to protect the land.

Several considerations need to be given to planning wilderness recreation lands within the context of a system of

all types of recreation lands. This is in order to provide support for the management policy alternatives outlined above. Firstly a system of wilderness lands needs to be integrated administratively so that if access is denied to one area then an alternative may be offered. This should be on a regional basis. Secondly it is necessary to consider wilderness within the context of recreation areas as a whole. If all the wilderness areas that a recreationist wishes to visit are full, then there must be overspill areas to which he may go instead. This is particularly important for syphoning off those who may come without a reservation only to be turned away because the area is full. Most of these overspill areas must therefore be near the true wilderness area access points and could usefully form a part of the buffer zones which are necessary to protect the true wilderness areas. As Wagar (1964, p. 12) points out, increasing numbers of people demand some place for recreation. It follows that these overspill areas need to be planned for relatively high densities of use and must be heavily managed with regard to campsite facilities and well-maintained trails. This need for a system of recreation lands to protect wilderness links up with the initial goal of recreation planning which was to set up areas for a maximum variety of activities. Thus the system will not only provide for all tastes, it will be the mechanism for protecting all tastes.

CONCLUSION

Hardin (1968) maintains that the system under which public lands are presently administered will lead to their inevitable destruction. This is because of the divergence of scale in the universe of perceived impact of additional increments of use of the commons that exists between the individual and the collective community (O'Riordan and Keogh, 1972). The satisfaction gained by the individual is great, and his effect on the resource or other users goes largely unnoticed. The marginal loss to the community caused by each individual increment is indeed small. However, at the community level, perception is different. It is not the impact of one individual which matters, rather the aggregate effect caused by all users, both on each other and on the resource. Because of this perception of the individual, use will continue to rise, if allowed to do so unrestricted, until the commons is destroyed.

It has been suggested in this paper that this process ought not to continue, but rather the community perception, as seen by the manager, should have preference over the individual in wilderness areas. Such areas provide the medium for an important form of recreation, contributing towards the planning goal of supplying a maximum variety of activities. Objectives have been stated to provide wilderness recreation for as many people as wish to engage in it, but not to the extent of

over-burdening the land, damaging both it and wilderness recreation. By definition, this activity is a very low density use of land. Various methods of keeping use down to manageable numbers have been analysed. It was considered that measures which were but slightly restrictive would be adequate in many areas for some years to come. However, if wilderness areas are to be protected in the future, and this paper is of the opinion that they should be, then a change from a totally free use for unrestricted numbers of people is needed. This opinion requires that a price be paid, namely: a strict rationing of use by a reservation system to numbers and activities the resource can assimilate without damage, while other alternatives are provided for those who cannot gain access when they wish.

BIBLIOGRAPHY

- Brockman, C.F., 1959, Recreational use of wildlands, New York, McGraw-Hill.
- Bultena, G.L. & Taves, N.Y., 1961, "Changing wilderness images and forestry policy," Journal of Forestry, Vol. 59(2), pp. 167-171.
- Burke, H.D., 1969, "Wilderness engenders new management traditions," The Living Wilderness, Summer 1969, pp. 9-13.
- Campbell, F.L., Hendee, J.C. & Clark, R., 1968, "Law and order in public parks," Parks and Recreation, December 1968, pp. 28-31, 51-55.
- Carhart, A.H., 1961, Planning for America's wildlands, Harrisburg, Penn., National Audubon Society, Wilderness Society, Wildlife Management Institute.
- Catton, W.R., Jr., 1969, "Motivations of wilderness users," Pulp & Paper Magazine of Canada (Woodlands Section), pp. 121-126.
- Clawson, M. & Knetsch, J.L., 1966, Economics of outdoor recreation, Baltimore, published for Resources for the Future, Inc., by Johns Hopkins Press.
- Darling, F.F., 1967, "A wider environment of ecology and conservation," Daedalus, Fall 1967, 96(4), pp. 1003-1019.
- Douglass, R.W., 1969, Forest recreation, Oxford, Pergamon.
- Ferguson, R.B., 1966, "Comments on: wilderness management - a growing challenge," Journal of Forestry, 64(10), pp. 692-693.
- Fisher, J., Simon, N. & Vincent, J., 1969, Wildlife in danger, New York, IUCN, Viking Press.
- Hardin, G., 1968, "The tragedy of the commons," Sci, 162, pp. 1243-1248.
- _____, 1969, "The economics of wilderness," Natural History, 78(6), pp. 20-27.

- Hendee, J.C., 1970, "Recreational values, use and management of natural areas," in Natural areas - needs and opportunities, Dittrich, W.J. & Trappe, J.M. (eds.), 1970 symposium proceedings of the Northwest Scientific Association, Corvallis, Oregon, pp. 35-38.
- Hendee, J.C. & Catton, W.R., Jr., 1968, "Wilderness users - what do they think?" American Forests, 74(9), pp. 29-31, 60-61.
- Hendee, J.C., Catton, W.R., Jr., Marlow, L.D., Brockman, C.F., 1968, "Wilderness users in the Pacific Northwest: their characteristics, values and management preferences," USDA Forest Service, Research Paper PNW-61, Pacific Northwest Forest & Range Experimental Station, Portland, Oregon.
- Hendee, J.C. & Harris, R.W., 1970, "Foresters' perception of wilderness-user attitudes and preferences," Journal of Forestry, 68(12), pp. 759-762.
- Hendee, J.C. & Mills, A., 1968, "The proposed Enchantment Wilderness: management to preserve wilderness values," The Living Wilderness, Spring 1968, pp. 15-20.
- Kruckeberg, A.R., 1970, "Natural areas: scientific value and conservation ethic," in Natural areas - needs and opportunities, Dittrich, W.J. & Trappe, J.M. (eds.), 1970 symposium proceedings of the Northwest Scientific Association, Corvallis, Oregon, pp. 9-13.
- Krutilla, J.V., 1967, "Conservation reconsidered," Amer. Ec. Rev., 57(4), pp. 777-786.
- Leopold, A., 1921, "The wilderness and its place in forest recreation policy," Journal of Forestry, 29, pp. 718-721.
- _____, 1949, A sand county almanac, New York, Oxford University Press.
- Lime, D.W. & Stankey, G.H., 1971, "Carrying capacity: maintaining outdoor recreation quality," paper presented to Forest Recreation Symposium, Syracuse, N.Y.
- Lowenthal, D., 1961, "Geography, experience and imagination: towards a geographical epistemology," Ann. Assoc. Amer. Geographers, 51(3), pp. 241-260.

- Lowenthal, D., 1962, "Not every prospect pleases - what is our criterion for scenic beauty?" Landscape, 12 (Winter), pp. 19-23.
- Lucas, R.C., 1964, "Wilderness perception and use: the example of the Boundary Waters Canoe Area," Natural Resources Journal, 3(3), pp. 394-411.
- _____, 1965, "User concepts of wilderness and their implications for resource management," in New horizons for resources research: issues and methodology, Western Resources Conference, 1964, Boulder, University of Colorado Press, pp. 29-39.
- _____, 1966, "Contribution of environmental research to wilderness policy decisions," Journal of Social Issues, 22(4), pp. 116-126.
- McCurdy, D.R., 1970, "Recreationists' attitudes toward user fees: management implications," Journal of Forestry, 68(10), pp. 645-646.
- McTaggart-Cowan, I., 1968, "Wilderness - concept, function and management," Horace M. Albright Conservation Lectureship, University of California, Berkeley, School of Forestry & Conservation.
- Nash, R., 1967, Wilderness and the American mind, New Haven, Yale University Press.
- National & Historic Parks Branch, Department of Indian Affairs & Northern Development, 1957, "Origin and meaning of national parks of Canada," Saskatoon, Larson Publishing Company.
- National & Historic Parks Branch, Department of Indian Affairs & Northern Development, 1969, "National parks policy," Ottawa, Queen's Printer for Canada.
- National & Historic Parks Branch, Department of Indian Affairs & Northern Development, 1970, "Jasper National Park provisional master plan. Public hearings on provisional master plans for Canada's national parks," Ottawa, Queen's Printer for Canada.
- National Parks Branch, Department of Northern Affairs & National Resources Canada, 1956, "The National Parks Act," Ottawa, Queen's Printer for Canada.

- National & Provincial Parks Association of Canada, 1971 (June), "Parks for tomorrow," Toronto.
- Nelson, J.G. (ed.), 1970, Canadian parks in perspective, based on conference, Calgary, October, 1968, Montreal, Harvest House.
- Nelson, J.G., Cordes, L.D. & Masyk, J., 1972, "The proposed master plans for Banff National Park: some criticisms and an alternative," Canadian Geographer, XVI(1), Spring 1972, pp. 29-49.
- O'Riordan, T., 1971, Perspectives on resource management, London, Pion Press (manuscript copy, January 1970, Simon Fraser University).
- O'Riordan, T. & Keogh, B., 1972, "The tragedy of the recreational commons," mimeo, Department of Geography, Simon Fraser University.
- Outdoor Recreation Resources Review Commission, 1962, "Wilderness and recreation - a report on resources values and problems," ORRRC Study Report No. 3, University of California Wildland Resource Centre.
- Pimlott, D.H. & Litteljohn, B.M., 1971, Why wilderness? Toronto, New Press.
- Port Angeles Evening News, June 21, 1971.
- Sigund, F.O., 1966, "The spiritual need," in Wilderness in a changing world, B.M. Kilgore (ed.), Sierra Club, San Francisco, pp. 212-219.
- Snyder, A.P., 1966, "Wilderness management: a growing challenge," Journal of Forestry, 64(7), pp. 441-446.
- Spurr, S.H., 1966, "Wilderness management," The Horace M. Albright Conservation Lectureship VI, University of California, Berkeley, School of Forestry.
- Stankey, G.H., 1971, "The perception of wilderness recreation carrying capacity: a geographic study in natural resources management," Ph.D. dissertation, Michigan State University.
- Tuan, Y.F., 1971, "Man and nature," AAG Commission College Geog. Resource Paper No. 10.

- United States Department of Agriculture, Forest Service,
no date, "Obtaining your wilderness permit for the
National Forests in California," Ref. No.
GPO-980-697, Region No. 5 (California).
- United States Department of Agriculture, Forest Service,
no date, "Using Eagle Cap Wilderness," Ref. No.
GPO-998-826, Region No. 6 (P.N.W.).
- United States Wilderness Act, Public Law 88-577, 3 September,
1964.
- Wagar, J.A., 1964, "Carrying capacity of wildlands for
recreation," Forest Science Monograph 7, Washington
D.C., Society of American Foresters.
- Zahniser, H., 1963, "Wildlands, a part of man's environment,"
in A place to live, U.S. Department of Agriculture
Yearbook of Agriculture, 1963, pp. 346-354.

THE WEST COAST TRAIL;
A QUALITATIVE APPROACH TO THE
EVALUATION OF RECREATION

by

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ABSTRACT

A considerable amount of disagreement exists over the possibility or otherwise of measuring the benefits of outdoor recreational facilities in traditional economic terms. The position taken in this study is that economic analyses have omitted to take into account a number of significant values stemming from externalities associated with recreational facilities. These omissions are crucial, particularly for natural areas which possess unique or rare characteristics of such a nature that these would be destroyed by developing the area containing them for other purposes. Because of this failure of existing quantitative models to adequately evaluate such areas, this study develops a new qualitative approach to evaluation. A mail questionnaire interview is used to determine what features are valuable for recreation in the area concerned, whether these are unique and irreplaceable, and whether they would be destroyed by a decision to develop the region. This information is sought from the first-hand knowledge of current users of the area. Such information is thought to be particularly relevant where the final decision to develop or preserve a natural area is made in the political arena.

The analysis is applied to a part of Vancouver Island, British Columbia, known variously as the Life Saving or West Coast Trail. Through information obtained from the questionnaire, it is proved that this region contains unique

characteristics of considerable value to present users of the Trail. These values will be very largely destroyed if the area is managed for multiple use, which is the type of land use presently proposed for it. It is argued, consequently, that the value of this area will be much greater to society as a whole, when it is considered in a larger regional context and not as a single entity, if it is preserved in its present condition, and not developed for any other purposes.

.....again I hear
These waters, rolling from their mountain-springs
With a soft inland murmur - Once again
Do I behold these steep and lofty cliffs,
That on a wild secluded scene impress
Thoughts of more deep seclusion

Wordsworth

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TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	iii
QUOTATION	v
ACKNOWLEDGEMENT	vi
TABLE OF CONTENTS	vii
LIST OF MAPS	viii
INTRODUCTION	1
REASONS FOR THE INADEQUACY OF EXISTING MODELS FOR EVALUATING THE BENEFITS OF OUTDOOR RECREATION	2
PROBLEM	9
STUDY AREA	12
Location and Description	12
Specific Problems	14
METHOD OF STUDY	20
RESULTS	23
DISCUSSION OF RESULTS	30
Their Meaning for the West Coast Trail	30
Validity of the Questionnaire	35
CONCLUSION	36
APPENDIX A: QUESTIONNAIRE AND COVERING LETTERS	38
APPENDIX B: RESULTS FROM QUESTIONNAIRE	48
BIBLIOGRAPHY	81

LIST OF MAPS

	<u>Page</u>
LOCATION OF THE WEST COAST TRAIL - VANCOUVER ISLAND	11

INTRODUCTION

A considerable amount of literature has been written during the last few years concerning methods of evaluating the social benefits of non-priced recreation and of the land used for this purpose. Techniques of evaluation have become progressively more sophisticated. However, despite these advances, a number of controversies remain. One concerns the conceptual and technical possibility of evaluating recreational benefits at all in monetary terms (Leopold, 1949; Carhart, 1961). Another is whether either the correct or the complete values may be estimated (Seckler, 1966; Patterson, 1967; Wildavsky, 1967; Wollman, 1967; Krutilla, 1967a, 1967b, 1971).

In view of this apparent failure of existing models to allocate resources correctly, this study explores the possibilities of a qualitative approach to evaluating the social benefits of outdoor recreational facilities. Attention will be focussed particularly on specific problems of wilderness areas and other natural phenomena which have unique characteristics of value. A brief resume will be given of the reasons for the inadequacy of existing models as discussed elsewhere in the literature. In the remainder of the study the possibilities and value of the qualitative approach will be discussed. The analysis will be applied to an area of British Columbia known variously as the West Coast Trail or the Life Saving Trail.

REASONS FOR THE INADEQUACY OF EXISTING
MODELS FOR EVALUATING THE BENEFITS OF
OUTDOOR RECREATION

Those who argue in favour of evaluating benefits of outdoor recreation in monetary terms maintain that it is legitimate to do so since the use of outdoor recreation facilities differs only in kind, but not in principle, from consumption patterns of other goods and services (Clawson, 1959; Davis, 1963; Clawson and Knetsch, 1966; Knetsch and Davis, 1966). Further, they argue that no goods or services are priceless in the sense of having an infinite price, but that there is an individual and collective limit to how much we will give up to enjoy the services of any outdoor recreation facility or to preserve any scenic resource. It is therefore assumed that the most relevant economic measure of recreation value is consumers' willingness to pay for outdoor recreation services.

In view of the fact that the majority of recreational facilities are provided free or at subsidised rates, most evaluation studies have attempted to simulate a market through various surrogate values. Descriptions and discussions of these individual studies have been given elsewhere (Knetsch and Davis, 1966; Clawson and Knetsch, 1966, Chapter 11; O'Riordan, 1971, Chapter 3). Information from such market simulations has been used to construct demand curves, from which a total economic value has then been calculated.

Despite the reasoning of these writers a number of fundamental disputes still exist over the possibility or otherwise of measuring these benefits. Seckler (1966) argues against the fact that consumers' willingness to pay is the relevant value of outdoor recreational facilities. He maintains that the whole purpose of providing free recreation is to enable all to have an equal chance to use facilities regardless of income. Yet statistical demand curves do not measure the utility function of recreational facilities, rather they reflect the diminishing marginal utility of income. He rejects the equation between value or utility of a freely provided social good and individual consumer's willingness to pay for it on the grounds of the diminishing marginal utility of money, stating that the amount of income one is willing to give up is mainly a function of how much income one has. Hence, when demand curves based on willingness to pay are used for evaluating benefits of outdoor recreation more account is taken of the values of the rich, since they are able to pay for them, than of the relatively poor. As a result of this, a 'corrected' demand curve which would be equal to a marginal utility schedule would be considerably flatter than the statistical demand curves computed by the majority of studies so far completed.

Models based on the willingness to pay of present users have been criticised on other grounds. The significance of

externalities associated with outdoor recreation which are not accounted for by a price system is noted by a number of writers (Seckler, 1966; Davidson et al., 1966; Patterson, 1967; Wildavsky, 1967; Wollman, 1967; Krutilla, 1967a, 1967b, 1971). These externalities take a number of forms, and may have both positive and negative value. Negative externalities are associated particularly with interpersonal effects of recreationists (O'Riordan and Keogh, 1972). The behaviour of other individuals, and the presence of others in too great a number are examples of such factors. These are likely to reduce the quality, and hence the value in whatever terms value is considered, of some individuals' experiences. Willingness to pay fails to take many of these negative values into account, since a recreationist may visit a particular site (and hence be recorded in the demand schedule), yet experience considerable dissatisfaction with overcrowding and other environmental non-amenities (O'Riordan, 1971, p. 63). However, other factors may tend to increase the value of an individual's experience, such, perhaps, as the sight of a rare species or other occurrence which was not expected. This 'unexpected' nature of many recreational experiences, whether the unexpected is pleasurable or not, makes every experience different whether or not these take place at the same site. Because of this it is not possible for a person to state one value for an area in terms of his own enjoyment.

A number of writers have completely rejected traditional methods of evaluation, largely because of the externalities associated with outdoor recreational activities which the traditional economic approaches have generally ignored. Carhart (1961, p. 6), for example, claims that traditional methods of analysis cater only to mass taste, and do not measure the quality of the individual experiences. Leopold (1949) holds to a dichotomy of aesthetic and economic values and also shows apprehension concerning the dominance of mass taste. Wollman (1967, p. 1105) notes:

"The non-utilitarian is very essential, but missed by economists because it cannot be measured in monetary terms. Measuring direct sensual response is more difficult than measuring productivity, but the validity of the thing measured, human satisfaction, is more compelling."

Externalities may be associated with all forms of outdoor recreation, but some are associated particularly with naturally occurring phenomena of a rare or unique type. Examples of such are a scenic gem, a threatened species, or an entire ecosystem. Any of these phenomena would be destroyed permanently by a decision to develop the area containing them for resource exploitation, higher density recreation use, or any other purpose.

There may be important option demands for facilities having such unique natural characteristics. A value in their existence may be appreciated by people who have never seen them, and who maybe do not foresee any possibility of ever

seeing them. Krutilla (1967a, p. 781) remarks that there are many persons who obtain satisfaction from mere knowledge that part of wilderness North America remains even though they would be appalled by the prospect of being exposed to it. He defines this option demand as a willingness to pay for retaining an option to use an area or facility that would be difficult or impossible to replace and for which no close substitute is available (Krutilla, 1967a, p. 780).

There are other values of unique or rare natural phenomena which existing market models fail to consider. It seems likely that future demand for the limited quantities of resources containing such phenomena will increase very significantly. That such increases of demand are likely to occur may be explained by a number of factors. As more people, through increased leisure time, are exposed to forms of recreation which use these resources, opportunities to acquire knowledge and experience will increase, and user demands will tend to rise over time through a learning-by-doing process (Davidson et al., 1966). Changes in technology will have further significant effects which will tend to increase demand for these recreational facilities. Such changes are likely to provide the leisure time which is necessary to pursue wildland recreational activities. At the same time, technology has provided light-weight equipment and processed foods which have made wilderness more pleasant for many more people. There seems every reason to believe that we may look forward to a

continuance of this trend, Technological change is likely to cause a significant asymmetry of future values for the two management alternatives currently facing the remaining natural areas, i.e. preservation, or exploitation of their resources for other purposes. The fact that technology will tend to increase the value to society of the preserved option has already been observed. But as it produces more substitutes for products presently obtained from natural resources, the marginal value to society of developing such resources will gradually decrease over time (Krutilla, 1971). Marginal values to society over time of developed and preserved areas have also altered through reasons other than technological advance. Pearse (1968a, 1968b, 1969) has discussed these changing marginal values associated with exchanging increments of land from one use to another. His argument may be extended here to include lands with which the present discussion is concerned. Over the years, as previously wild areas have been progressively destroyed and their resources harvested, those that remain have acquired a scarcity value, and the marginal social value of each of these remaining units has gradually increased as society has come to realise a value in such areas. On the other hand, the marginal social value of adding more and more units of land to various developmental alternatives has steadily decreased as we have had more of them.

This brief analysis demonstrates certain limitations of existing models of evaluation. To claim present users'

willingness to pay as the relevant economic value of potential recreational resources, is to omit consideration of a large number of apparently very significant externality values associated with them.

Wildavsky (1967, p. 1117) claims that if the old economics will not let you have what you know is right, then it follows that a new economics is evidently needed. One of the tasks of the new economics is to decide when things should not be done (Wollman, 1967, p. 1111), such as building a road into a hitherto wild area, developing it for high density recreation, or harvesting its resource values.

Frequently, regardless of any economic analyses and the verdicts these may come to, resource issues are resolved largely in the political arena (Wildavsky, 1967). Whenever an area is considered for development there is now a tendency for interested parties to polarise into two major political groups: a 'preservational group' made up usually of various conservation groups; and a 'developmental group'. These groups campaign for public support, much of which they obtain from people who are not directly interested in the issue, but who join it as a matter of principle to preserve their option values. The final decision is increasingly made through public debate, which is made possible by the holding of public hearings for many of these issues, and through the lobbying of political pressure groups.

PROBLEM

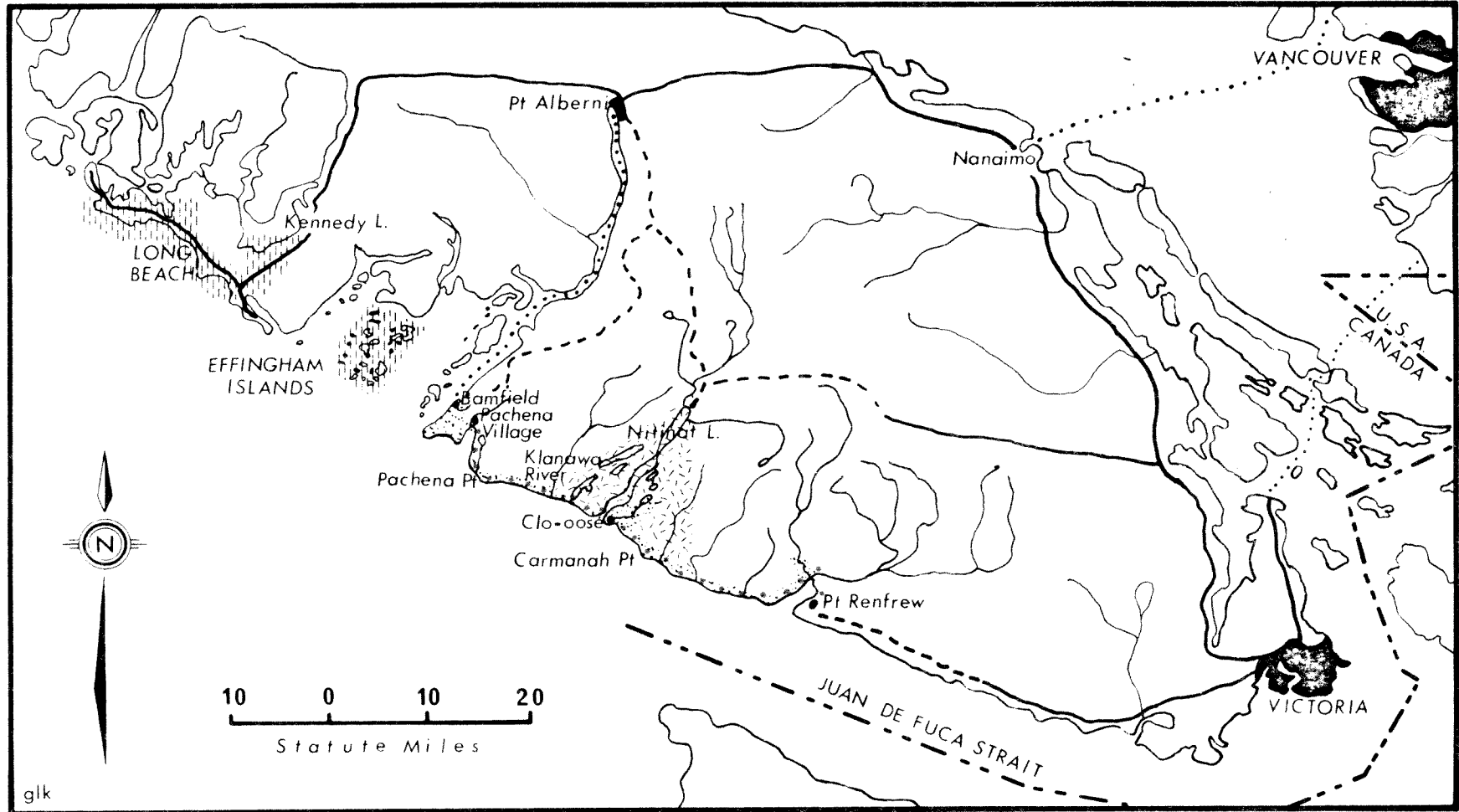
As economic analysis is considered unable to provide very meaningful input to this political process, some other form of analysis is clearly needed. This study attempts to devise such a form of analysis. It is considered here that relevant information which will be useful to the lobbying groups interested in a preservational option for an area is qualitative and not quantitative data. What is required is an inventory of the features which are perceived as having value. If it is proven that an area possesses unique or rare natural characteristics which would be destroyed by any form of development, it may be assumed that the area has unmeasurable option values. All such values, in whatever terms these are considered, are likely to gradually increase over time for all of the various reasons discussed above. If this case is proved there seems no point in attempting to devise proxy monetary values which have little relevance or meaning. It will already be known what values are at stake in the political debate, and also how any decision will affect these values. What then remains to be done after this uniqueness has been proved is to convince enough people of their option values which are in danger and mobilise them for action in order to fight the case in the political forum. The eventual decision will either maintain these values or it will permanently destroy them, since compromise is rarely a third alternative.

If the issue is won it will then be necessary to decide how to manage the area in order that the publicity engendered by this kind of action does not cause the area to be destroyed by overuse (King, 1972).

This study attempts to develop the sorts of questions which need to be asked to obtain information of this kind. It will be necessary to discover through this analysis what recreationists value, whether they think features in the area under consideration have unique characteristics of value, whether these are irreplaceable, and whether the features' continued existence would be prejudiced by some form of developmental alternative. It is considered desirable to ask recreationists themselves for this information in view of their first-hand knowledge. This point may be very significant, since many people who fight for preservation through 'preservation groups' mentioned above, may never have visited the area concerned, but may merely be attempting to safeguard their undefined option values.

The area where the analysis is applied has the preservation/exploitation decision hanging over it at present. Consequently the study has two concerns: to determine the usefulness of what is thought to be a new form of user opinion survey; and to find specific information about the area where this was applied which may make a useful contribution to a decision to be taken on it.

LOCATION OF THE WEST COAST TRAIL - VANCOUVER ISLAND



Nitinat Triangle



Area presently agreed for Trail section of Park



Other two sections of Pacific Rim National Park



The West Coast Trail



International Border



All-purpose road



Industrial road



Scheduled ferry

STUDY AREA

Location and Description

The West Coast or Life Saving Trail¹ is located on the west coast of Vancouver Island in British Columbia. More particularly the area is a strip of coast between Bamfield and Port Renfrew, a distance of approximately fifty miles. Port Renfrew is about sixty miles from greater Victoria, and both terminal points of the Trail are about six hours from the million inhabitants of the greater Vancouver area.

So far the area has been left relatively unaffected by human activities, except for the building of three lighthouses, some small-scale, predominantly native settlements which have now been largely abandoned, and the Trail itself, which runs the whole length of the coast between the two points mentioned. This Trail was built by the Federal Government in 1890, and was subsequently improved, to aid shipwrecked sailors along this particularly dangerous stretch of coast, known as the 'Graveyard of the Pacific'. It has been the site of numerous wrecks since it is near the entrance to the Strait of Juan de Fuca (Scott, 1971). A telegraph line was also constructed along the Trail to link the lighthouses with Victoria and Bamfield. In an area of comparatively recent European settlement of any great extent, the Trail is considered relatively historic. Maintenance

¹Called hereafter "the Trail".

of the southernmost part from Port Renfrew to Carmanah was discontinued in 1954 as it was rendered obsolete by radio telephone and helicopter rescue service. The length between Carmanah and Pachena Point was decommissioned in 1963 (Hamilton, 1967) and the six miles from Pachena Village to Pachena Point in the north were finally abandoned in 1971. A small amount of clearing has been accomplished by provincial public employees and by some volunteer workers on the longer abandoned stretches of the Trail (Scott, 1969). Otherwise, with the particularly wet climate of this area, the condition of the Trail rapidly deteriorated. Over the years, bridges have become dilapidated and dangerous and numerous fallen trees have blocked the Trail. Nevertheless an increasing number of recreationists have begun to use the Trail despite, or perhaps because of, its difficulties and dangers.

A variety of coastal scenery exists, including high sea cliffs, caves, arches, stacks and beaches of many types. About thirty-five creeks and rivers run into the sea along the Trail and there are approximately a dozen lakes close to the Trail. Vegetation consists almost entirely of virgin west coast climax rain forest of hemlocks, spruce and red cedar. This still extends over much of the coastal watershed. Undergrowth of the immediate coastal district is composed largely of salal which is particularly difficult to penetrate. It is this which was largely responsible for overgrowing the Trail so quickly after its abandonment by the Department of Transport.

However, inland the undergrowth is less dense and the forest is readily penetrable. Wildlife in the interior of the area is limited, but includes deer, elk, black bear and cougar. The area is reported to be the last remaining habitat of the Vancouver Island wolf and wolverine (Sierra Club, 1971, p. 22). A variety of birds are present, the bald eagle being of particular significance. Marine and shore life is more plentiful. Apart from the usual small sea crustacean animals, various types of seal and whale, sea otters, sea lions, mink and martens all inhabit the area. Species of coastal birds are numerous, the rarest of which is the trumpeter swan which spends the winter in one part of the area (Sierra Club, 1971, p. 22).

Land access to the area is by industrial logging roads which penetrate to each of the terminal points of the Trail and to the head of Nitinat Lake. These roads are rough and are only open to the public during restricted hours: at night and at the weekends. There is a scheduled ferry run into Bamfield from Port Alberni, and other watercraft may be chartered from Victoria and from the head of Nitinat Lake.

Specific Problems

A conflict of interests exists in this area. The timber resources are valuable, but on the other hand, from the description given above, it may be realised that the area already has considerable intrinsic value and potential for wilderness recreational activities. The two uses are not

compatible. As a result of this, a number of parties have become interested in the area recently and conflict between some of them has reached the national level.

The current situation for land use of the region is that the majority of it, which is owned by the Province as crown lands, has been devoted to Tree Farm Licences for the harvesting of its timber values. But an agreement also exists dating from April 1969 (B.C. Statutes, 1969) to allow a strip of land, half a mile wide for the length of the coast, to be included as the southernmost section of the three-unit Pacific Rim National Park. The other two units, which are already functioning as a national park, are: the Effingham Islands, which are to remain a wilderness nature reserve; and a stretch of coast to the north, known as Long Beach, which is to be a relatively high density recreation area.

The 'preservation group' which is concerned with this area is made up of a number of parties, the most important of which are the Federal Government (National and Historic Parks Branch) and the Sierra Club of B.C. which heads a number of provincial conservation groups. This group wants a much larger section of the region preserved in the national park than that currently agreed. Opposing inclusion of any more land in the park is the 'developmental group', made up of the Provincial Government (Department of Lands, Forests and Water Resources), and the Council of Forest Industries, which represents the forest companies of the province.

A personal communication from the Federal Minister of Indian Affairs and Northern Development states:

"The original intention for including the Life Saving Trail as one of the three units of the National Park was to secure a wilderness hiking experience with its major aspect toward the sea. To satisfy this intention, a fairly narrow strip of land would suffice, provided that the lands adjacent to the strip are used as a buffer to logging and other inland uses" (July 29, 1971).

The half mile mentioned in the original agreement extended at one point to include a small part of Nitinat Lake, the largest of the area, and one other of the remaining dozen lakes. This agreement was left open to suggestions by either government for change after making suitable studies of the area. Subsequently the Federal Government has requested that the boundaries be widened (Vancouver Sun, September 16, 1970), but no new agreement has yet been finally reached. This request is supported by the Sierra Club (No date and 1971), the B.C. Wildlife Federation (1972) and the National and Provincial Parks Association of Canada (N.P.P.A.C. 1971; Murray, 1971).

The rationale of the 'preservation group' for this request is that the strip of land proposed in the original agreement is too narrow to give adequate protection to the major ecological attractions of the Trail, and that other valuable features have been omitted entirely. The most notable omissions are the complex of lakes which occupy a zone which has come to be known as the 'Nitinat Triangle', inland from the mid-point of the Trail. It is maintained that this is the

last and only watershed of west coast climax rain forest which is left to preserve, and that if this is developed "our National Parks system will have lost a gem that should rightly be a part of Canada's heritage" (Murray, 1971, p. 16).

The 'developmental group' espouses the concept of 'multiple use' as offering the greatest benefits for the people of the province, rather than the single use of preservation. This allows for sustained yield forestry production and certain types of recreational activities to co-exist as different, but compatible uses on the same area of land. The position of this group may be made clear by two quotations, one from J.V. Cline, written while chairman of the board of one of the interested logging companies; the other from the Provincial Minister of Lands, Forests and Water Resources. The forest industry's position is:

"The people of this province will be justified in expressing resentment if they discover they have been persuaded into giving over to single-use preservation large areas of their own resources which ought to provide them with both recreation and a secure livelihood, in perpetuity."

"The forest industry and the people of B.C..... have developed over the years "what is..... one of the most effective and balanced systems of forest management anywhere in the world. It is solidly based on the concept of multiple use which guarantees that the greatest social and economic values of the forest resource will be made available to all British Columbians." (J.V. Cline, quoted in N.P.P.A.C., 1972).

The Provincial Government believes:

"A balanced use forest adjacent to a protected West Coast Trail will provide the maximum

potential for the people of this province. It will provide the maximum output of wood products together with the jobs that go with this production. It will provide the maximum variable recreation in the form of campsites, boat ramps, beaches, etc., together with fish and wildlife for the hunter and fisherman. All this adjacent to the Trail Park which will protect the beauty of the coast and a sample of the coastal rain belt. It will also provide some interesting safe canoeing in the Doobah Cheewah Lake area. The wilderness hiker will have his trail and beaches and the greater number of average recreationists will be able to drive to where they wish to go to hunt and fish and boat and all will benefit." (Personal communication, B.C. Minister of Lands, Forests and Water Resources, September 10, 1971).

In the same communication it is claimed that the government would find it very difficult to pay adequate compensation to affected forest companies if yet more land were removed from legally established Tree Farm Licences on these crown lands. The Province's position may also be explained by the Constitution under which the Province has jurisdiction over its own resources. In order for the area to become a national park, the lands must be given to the Federal Government free of all encumbrances (Nicol, 1970, p. 26). The Provincial Government is understandably reluctant to lose its jurisdiction over any more of this area.

Many arguments have been given against the forest industry's needing so much land in the province (Hunter, 1972). Public meetings in support of preserving more land as a buffer to protect the Trail have been held, and attended by large numbers of people. For example, an estimated eight hundred

people had to be turned away after more than six hundred and fifty crammed the auditorium at one such meeting held in Victoria on March 8 of this year, which was attended by the Federal Minister responsible for national parks (Victoria Daily Colonist, March 9, 1972). It would be interesting to speculate on how many of these people had ever been or ever intended going to the area, and how many were just attending the meeting to safeguard their option values. Whatever their reasons for attending, such large numbers of people indicate very considerable interest and action on the part of the public.

The outcome of the public debate so far has been an offer on the part of the Province to give half of the land which the 'preservation group' has asked for in the 'Nitinat Triangle', in exchange for an equivalent amount of lands already included in the park in the Long Beach section (Vancouver Sun, March 17, 1972). It should be noted that the amount of land the Federal Government is asking for is already a compromise of earlier demands made by the Sierra Club (Victoria Daily Colonist, March 16, 1972).

It has been decided that the final date for setting the boundaries should be April 1, 1973. Meanwhile, as debate drags on, the logging companies continue to build their roads into the 'Nitinat Triangle', the area of the main controversy (Murray, 1971).

METHOD OF STUDY

The study had essentially two major stages. The first was completed in July, 1971. This took the form of an on-site pilot survey to explore the region over which the controversy was developing. At the same time, conversations of a very informal nature were held with hikers on the Trail to discover what had attracted them to visit it, and to find out what they felt now that they were directly acquainted with it. These interviews took place as a form of participant observation (Campbell, 1970). The author did not reveal his main purpose for engaging interviewees in conversation in order not to bias their statements. In this fashion it was possible to talk with approximately seventy-five people on a fairly extended basis. From them information was obtained for setting up a questionnaire for the second part of the study. This was mailed out in March, 1972.

The purpose of the questionnaire was to determine whether recreationists thought the Trail offered any features which were unique, how highly they valued these things, and also to ascertain whether there were any features which they had not enjoyed and to which they objected. In order to accomplish this aim, it was necessary to discover what had initially caused them to go, what they had enjoyed while they were there, and what they thought about their experiences in retrospect. Accordingly, questions were arranged after Clawson's model of

the phases of a recreational experience, namely: expectation, travel to site, on-site, travel from site, and recollection phases. Two of these five phases were not considered since they did not refer to the site itself; travel to and from the area. Otherwise, questions were arranged according to their applicability to these three phases:

1. The Expectation Phase

Respondents were asked to cast their minds back to the time when they made the decision to go to the Trail and to consider what they expected to experience when they made the trip. It was hoped that answers to these questions would indicate the degree to which people went to the area to enjoy aspects of specific interest, or whether they went there merely for somewhere to go, indicating a preference for a kind of recreational activity that could have been satisfied equally as well elsewhere.

2. The On-Site Phase

This section included questions concerning the values respondents placed on their experiences, and on items they saw in the area. This included both things they did and did not like. Some questions were posed to discover reactions to suggestions for certain changes in management and access routes to the region which are likely to occur.

3. The Recollection Phase

Questions were directed at discovering more general knowledge of respondents' attitudes after these had had time

to mature. An attempt was made to find the amount of knowledge these people possessed of the controversial background of this section of the national park as an indication of their general interest.

The design of the questionnaire (Appendix A) was intentionally left as open-ended as possible, with much encouragement given to make additional comments outside the more specific questions that were asked. Respondents could write as much or as little as they wished. It was considered that a questionnaire design of multiple-choice answers would have biased responses more than the open-ended one which was used. As far as possible general questions were asked which would enable respondents to supply their own answers of a specific nature in order to reduce interview bias to a minimum.

The sample was obtained from the visitor registration book at Pachena Lighthouse. It is recognised that the selection made may include a bias in a number of ways as discussed by Lucas and Oltman (1971). The selection was made under these conditions:

1. Only those whose names and addresses were legible could be contacted. This removed a number of prospective respondents who indicated their address as a city, or even a province or state. If the name was uncommon it was possible to seek the address in a telephone directory.

2. Generally only heads of parties sign. Whenever more than one person did sign, the questionnaire was addressed to all of these people in the hope it would be completed as a communal project.

3. Many people do not sign. Nothing could be done to contact most of these people. However, five of the sample who did not sign the register were contacted later through other channels.

These biases have been mentioned, but are not considered important in the present instance, since the study is as much one in experimental methodology (the type and composition of the questionnaire) as it is place specific.

RESULTS

A total of 55 questionnaires were mailed out in mid-March. By mid-May 33 of these had been returned, 1 having been returned by the Post Office as "address unknown". A follow-up letter was sent to the remaining non-respondents. After a further two weeks 5 more were returned, making a total of 38 out of the original 55 accounted for, 37 of which had been returned complete. The rate of return was 68.5%.

The majority of questionnaires were answered in some considerable detail. The responses to each question were analysed and categorised as far as possible, detailed totals of which are listed in Appendix B. The results are presented

here as they applied to the three phases of people's experiences outlined above.

1. The Expectation Phase:

The majority of respondents had had little first-hand experience of the Trail before their visits of last season. 23 had not been to the area at all before, and a further 7 had only been once. Very few, however, appeared to have no idea of what to expect there. This may be accounted for by the fact that most people had heard about the area from the personal experience of friends and, to a lesser extent, from the media. If they indicated that they did not know for sure what they would see, the majority of respondents at least had some hopes and expectations. They were asked what they knew they would see and what they hoped or expected to see in the area in terms of a number of given factors, such as scenery, wildlife, vegetation, etc. From six such factors, which gave a possible total of 222 replies, only 14 were left unanswered. Surprisingly 11 of these non-responses were with respect to the state of the Trail (Questions 1-3¹).

It appears from these responses that the majority of people were well-informed of what to expect and that they were going to the region for certain specific reasons. In fact 32 noted that they expected to experience certain things that

¹This and subsequent references to questions refer to the results in Appendix B.

would not have been possible elsewhere in the southwestern part of the province. One answer which combined a number of the factors mentioned was:

"Yes - to walk more or less on the level, in a relatively unpeopled area, with a beautiful and unique combination of scenery (sea and land and sky) and vegetation - glorious car-free quietness and spiritual peace!"

All of those who had been to the Trail before said that they had returned to see more of it, to see specific features and to introduce other people, friends and family, to the area.

2. The On-Site Phase:

Most parties were small, 20 respondents indicating they were in parties of four people or less, and a further 8 were in parties of five or six people. Almost all respondents had gone with family or close friends who had similar interests. Trips made were of relatively short duration, 25 people having been there three nights or less. Only 6 people said they had left the Trail at any time to travel inland which they had done in order to examine certain features in greater detail, and only 8 respondents indicated that they had walked the whole Trail. However, 2 mentioned that they would explore areas off the Trail on a future visit, and a further 11 said that they would like to walk the entire Trail at some later date.

Respondents were asked to indicate whether certain features in the area, such as scenery, wildlife, etc., had any intrinsic value to society, and whether they themselves found these features interesting (Questions 11a-d). A scale

ranging from one-five was given, with one indicating the feature as very poor, and five as superb. Very high average values were allotted to: intrinsic value of the scenery, of the wildlife and of the vegetation, the variety of the Trail itself, and the interest of the scenery. All of these had an average value of four or more on the scale. Moderately high to high (3.3 and 3.9) ratings were assigned to the remaining aspects: variety of wildlife and interest of vegetation. 23 people indicated that the state of the Trail was suitable for them for the distance they had travelled, while most of the remainder noted that it was a little too difficult. However, a number of additional comments were made, almost all of which were favourable to the Trail in its present condition.

In answer to a question asking if they considered there were any features in this area to which they could not gain access elsewhere in the southwestern part of the province the respondents mentioned a considerable number of things (Question 12a-e). A notable answer said that it was the unique combination of factors which could not be experienced elsewhere in B.C. Only 3 people considered that they knew of a similar trail elsewhere, 1 of whom admitted uncertainty of the similarity since he had not visited the example he was offering. The rest could not think of a similar trail. 25 considered that there were scenic features, 18 that there were aspects of the vegetation, and 13 that they had seen wildlife species in this area, all of which were unavailable elsewhere in the

southwestern part of British Columbia.

Just over half of the respondents considered that the numbers of other people visiting the Trail at present were suitable, but almost all of the remainder thought that there were too many. A number of additional comments were made, all indicating adverse opinions on the behaviour of others, or a desire that many people should not come to the area (Question 11e). Answers to another question (13) asking if anything had upset or disappointed respondents during their visit to the Trail showed similar opinions. The 26 people who replied to this question named a variety of factors which had had this effect, the majority of which were trail bikes, and discarded litter. 3 of these were concerned with the state of the Trail. The remaining 11 people recorded no grievance. The average number of people that respondents wished to see before their enjoyment would start to be adversely affected was usually very small (Question 16f). However, generally speaking, respondents were happy to meet people on the Trail in their present numbers, and they found them pleasant and friendly. In 28 cases, in fact, such meetings increased the respondents' enjoyment of the Trail, though in 5 cases they did not and may be assumed to have had the opposite effect.

Improvement of the Trail was considered unnecessary and even undesirable by the majority. 13 people stated that it should not be improved at all, 5 of whom expressed this sentiment vehemently. A further 18 thought that only minimal

improvement was desirable, sufficient only to remove the greatest risks to bodily harm. This would involve largely either rebuilding or dismantling the most decrepit bridges. The reasons given for not wanting improvements were that these would remove the challenge that the Trail presently offers, and that they would encourage too many people to come. Only 6 thought major improvements should be carried out, but all of these people wished the Trail to remain strictly for hikers only.

Suggestions for improvement to existing access points or an increase of new ones were rejected even more strongly with 34 people reacting completely against this suggestion. The remaining 3 thought only minimal improvements necessary or desirable. The same reason was given for not improving access as for not improving the Trail: it would encourage too many other people who, in their numbers, would harm both the ecology and would very significantly reduce the enjoyment of those who already use the area. 3 respondents contrasted the area of the Trail favourably with Long Beach which they thought had been "spoiled" by the combination of too much publicity and too easy access.

3. Recollection Phase:

All except 1 respondent would like to go to the Trail again and 33 thought that they would in fact do so. The main reasons given for wishing to return were that they liked the region and would like to walk the remainder of the Trail. All

respondents, given some reservations depending on the character of the people with whom they were speaking, said they would give their friends a very favourable account (Question 18) and would encourage them to go.

In response to a question asking if their experiences here had changed their attitudes towards wilderness in any way, 18 replied positively (Question 19). The most detailed of a number of well expressed answers was:

"Perhaps my experiences have mainly made me realise that no one area is better than another. I can not say that I like the West Coast Trail better than hiking or climbing in the mountains or glaciers; I like both equally. In this way I think I am appreciating each area as just a part of the many different aspects and interpretations of wilderness. If any one wild area were totally destroyed, no other area could really make up for it - something would be lost that could not ever be replaced."

Interest in the region was shown by the fact that 30 respondents knew at least something of its controversial political background, although 4 of these admitted they knew very little. Views expressed were to the effect that a much wider buffer zone should be included within the national park boundaries than that currently agreed. Only 1 person thought that logging should be permitted beyond the area enclosed by the presently agreed boundaries. However, all except 7 respondents indicated pessimism for the area's future. Answers to a question (21) asking respondents to speculate on what it would be like in twenty years' time showed it as crowded and commercialised, whether or not it became part of the national

park, and that an objectionable amount of logging would have taken place too close to the Trail, destroying many of its presently most valuable characteristics. Only 6 people thought they would like the area as much in the future as they did now. 5 of these 6 speculated that it would have changed little from its present state, and 3 that the Trail itself would have been improved. In a previous question (14) 2 of these people had suggested considerable improvements for the Trail, the third had thought only minimal improvement was required. For these 2 people it may be assumed that they would in fact prefer it if the Trail were improved, provided this brought no other changes with it.

For 7 people the region already had too much evidence of man's influence in the landscape in order to be called true wilderness by their definition. However, 1 of these people said that several parts were "pretty close" to being wilderness, and another said that although the area could not be considered wilderness by her definition, this did not mean that it did not still offer a good experience. The other 30 people, from a myriad of definitions given, considered that the region could legitimately be called 'wilderness'.

DISCUSSION OF RESULTS

Their Meaning for the West Coast Trail

The responses to a number of questions asked in this survey indicate that people who visited the area of the Trail

considered it to possess certain special attributes. Questions applying to all the phases of recreationists' experiences point to this fact.

That people were relatively well-informed of what to expect, and that the majority thought they would experience things not possible elsewhere in this part of the province, are significant. The relatively high values which respondents placed on various features they saw while they were in the region, and also the fact that a considerable number of people felt that there were certain unique features of vegetation, scenery and wildlife there, are worthy of note. Almost everyone wished to return to the Trail to see and enjoy more of it. The comments which they would pass on to others were generally very enthusiastic and favourable towards the area in its present condition. Both of these factors demonstrate that the region possesses special characteristics. These may best be described as the unique combination of features which exist together, rather than any individual features. The Trail itself, which represents the combination of all features, was considered to be unique by almost all respondents.

That the majority of people were pessimistic about the region's future is not especially surprising considering they were mostly very aware of all the 'dangers' that threaten it, both from the bargaining parties involved and from the potentially large numbers of people who may come to visit it as a result of the publicity it is currently receiving. However,

it is important to note the very high proportion of people who said they would not like the region as much in the future when it would be very likely to have changed. Their frustrations for the future would seem to reinforce their liking for the area in its present state. This present liking for the area and desire to ward off apparently inevitable future changes are shown by the comments, sometimes very strong, against suggestions that the Trail and access to it should be improved and increased. Not only do they want these left as they are in order to keep out potentially large and damaging numbers of people, respondents actually like the features this way for the much greater challenge they offer.

It is legitimate to conclude from these findings that the majority of present users consider this area in its existing state to be wilderness and to possess certain unique and valuable characteristics. These values will be very largely destroyed if the surroundings of the Trail are devoted to multiple use. This is the method of land use which the Provincial Government expects will safeguard all values of the region (p. 17 above). The results of this survey demonstrate clearly that this belief is erroneous for a number of reasons. Multiple use will cause more access points to the Trail which will inevitably bring more people to it. But numbers of people currently visiting it are already considered sufficient or too great. If more people are encouraged to come, it seems the fear that the area would no longer be able to provide the

sort of quality experience of which it is presently capable, is a valid and serious one. This reduction of quality will be caused by the fact that larger numbers of people will unavoidably destroy the solitary and wilderness nature of the Trail. Quality of the existing experience will be further reduced by the fact that the Trail itself would have to be very greatly improved in order to increase its capacity to take more people. Yet it is the rough and challenging nature of the existing Trail which is attractive to the majority of present users. Demolition of the most decrepit bridges is the only change which many such users of the Trail would support.

If a strip of land only half a mile wide is preserved, and no further buffer zone is left to protect this from other inland uses, it is certain that many ecological and aesthetic characteristics which presently make the Trail what it is will be destroyed. For example, noise from logging operations will reach the coast and destroy the illusion of wilderness which might otherwise be preserved. Myles et al (1971, abstract) state:

"Noise from logging operations will carry up to 1½ miles under favourable conditions, but it is barely identifiable at that distance above the ambient noise level. Where machine noise is a concern, it is recommended that logging operations be kept at a minimum distance of one mile."

Thus, in order to protect a Trail that may remotely be called "a wilderness hiking experience" (Minister of Indian Affairs and Northern Development, p. 16 above), this minimum

distance of one mile is necessary. Specific ecological studies are required in order to determine how much more land is needed to protect the other elements which make up this apparently distinctive recreational experience. The B.C. Wildlife Federation (1972) has suggested an absolute minimum width of $1\frac{1}{2}$ miles.

The fact that the area is considered wilderness and the Trail is considered unique by the majority of the respondents interviewed in this survey indicates that the region has an immeasurable option value to an indeterminable number of people (p. 6 above). These values will be lost unless a larger buffer zone is preserved. As long as the area is untouched all its potential values will have been preserved, since it would still be possible to change the land use in the future if it was then considered socially desirable. However, as soon as the area is developed in any way, then a considerable number of its existing values will be lost permanently. The future values of an adequately preserved Trail are likely to increase as discussed above (pp. 6 - 7). Management choice is between making the region very similar to Long Beach, or leaving it as it is at the present time. The first choice will remove a very important potential characteristic of this national park: variety of recreational activity. The second choice will unquestionably give greater recreational enjoyment for more people, and hence a greater marginal social value, by providing for a wider variety of tastes in the park as a whole.

Important decisions will still have to be made with respect to managing this land for recreation and wilderness in order that too many people should not come and destroy the values for which the area was made part of the park (King, 1972).

Validity of the Questionnaire

The questionnaire itself has amply demonstrated its use and validity for the purpose for which it was designed. Almost all the questions contributed something to the discovery of certain values of the Trail and its surroundings. Answers received were well reasoned and not irrational, emotional outbursts. Despite the length and relatively complicated nature of the questionnaire, the rate of response was quite high, at 68.5%, and in fact 4 people said that they had found it interesting to answer.

A more exact method of approach would have been to interview people personally at the different stages of their experience which were represented in the questionnaire. However, this would have raised a large number of practical problems of attempting to find the same people again at different periods and places. If the questionnaire had been answered in the form of a personal interview in the individual's home after their visit to the region, better replies than those from the mailed questionnaire would have been obtained, and the rate of response may have been higher. During such an interview it would have been possible to follow up certain points that were raised which obviously the questionnaire was

unable to do. However, the expense and difficulty of doing this are likely to outweigh the better information which a personal interview approach may obtain. This would be the case particularly if the sample lived over a wide area, as did the respondents of this study.

This kind of analysis is useful for any area which is thought to possess unique characteristics of value. Such an analysis will be useful to obtain information to demonstrate the values of preserving an area for the general land use category of 'recreation'. It will also provide valuable information to aid management of the area in order to safeguard the values which are revealed. Clearly, for general application, certain questions would have to be modified according to the specific features and characteristics involved in the particular area under analysis.

CONCLUSION

This study has had a two-fold purpose: to evaluate the potential usefulness of a new form of user survey to discover the values of recreation; and to apply this survey to an area of British Columbia known as the West Coast Trail. The form of analysis has attempted to escape from all the problems and arguments which are held against traditional forms of economic evaluation, by seeking data of a qualitative kind.

The analysis showed present recreationists considered that the West Coast Trail possessed some very valuable

characteristics which would be destroyed by a decision to develop the area for any other purposes. When this one area was put into a larger regional context it was proved that the greatest present and future social values for the people of British Columbia and of Canada would be gained from preserving a much larger buffer zone to protect the values of the Trail than that provided for in an existing agreement.

An analysis of the type developed in this study will be useful in many other areas which possess unique and valuable characteristics when it is desirable to display these in the political arena where most of the final decisions concerning resource allocations and use are ultimately made.

APPENDIX A

QUESTIONNAIRE AND COVERING LETTERS

SIMON FRASER UNIVERSITY

DEPARTMENT OF GEOGRAPHY



BURNABY 2, BRITISH COLUMBIA
Telephone 291-3111 Area code 604

Dear

You will find enclosed a questionnaire from Mr. Graham King who is working on his Master's degree under my direction. The success of his project depends upon your cooperation which is earnestly sought. I can assure you that his report will not divulge individual information and that, should you wish it, a copy will be sent to you.

I do hope that he receives your cooperation.

Yours faithfully,

T. O'Riordan
Associate Professor

TOR:bs

SIMON FRASER UNIVERSITY

DEPARTMENT OF GEOGRAPHY



BURNABY 2, BRITISH COLUMBIA

Telephone 291-3111 Area code 604

OR
298-2689

I am at present engaged in research for my thesis entitled "Recreational Values of the Life Saving Trail" for the degree of Master of Arts at Simon Fraser University.

For this work I very much need some independent opinions of people who have been to the Life Saving Trail area of Vancouver Island. I took the liberty of obtaining your name from the visitors' book at Pachena Lighthouse. I would be most grateful if you would devote a small amount of your time to answer the enclosed questionnaire as soon as possible. A stamped return-addressed envelope is enclosed for your convenience.

The aim of the questionnaire is to find out some of the ways you personally value the area. It is intentionally open-ended, so please feel free to write as much as you wish.

If you have any problems deciphering the meaning of any questions, please do not hesitate to write to me, or phone me at either of the above numbers. I assure you any information you give me will remain anonymous and will not be used for any purpose other than my own thesis. Should you wish to know the results of this survey, I will be happy to send you a copy when I have the work completed. I should point out that the survey will not be a particularly large one, so your answers will be very valuable to me.

Your time and cooperation will be very greatly appreciated.

QUESTIONNAIRE TO ASCERTAIN VALUES OF THE
LIFE SAVING TRAIL

In this first section I would like you to cast your mind back to the time when you made the decision to go to the area of the Life Saving Trail on Vancouver Island, and consider what you may have expected to experience when you made the trip.

1. Your previous experiences of the Trail:
 - (a) How many times had you been before this last time?
1 2 3 4 or more
 - (b) When had you been there before (month and year if possible)?
2. How did you first find out about the Trail? (Please be as explicit as possible)

When?

3. What did you expect to see, before you ever went to the area, in terms a-f below? Please underline the things you particularly wished to see, and please add any other things which may have caused you to go the first time. It may well be that you knew nothing about many of these features, in which case please indicate such.

	<u>Knew</u> you <u>would</u> see	Vague <u>hope</u> you <u>may</u> see
(a) History of the area and man-made features		
(b) State of maintenance of the Trail itself		
(c) Vegetation		
(d) Scenery		
(e) Wildlife		
(f) Other people. Did you expect to see any or many other people?		

PLEASE FEEL FREE TO WRITE ON
REVERSE SIDES IF NECESSARY

4. In deciding to visit the Trail did you expect to do or see anything which would not have been possible elsewhere in south-west B.C.? Yes/No.
If so, what were these things?

5. Please mention any special reasons you may have had for going the last time you went, if you have been more than once.

This section of the questionnaire poses questions about your experiences and feelings during the time you have spent in the area.

6. How have you got to and from the area of the Trail, once you have got to Vancouver Island, on the various visits you have made?

7. How many nights did you spend there on your last visit?

8. (a) How many people were there in your party on your last visit? 1 2 3 4 or more?

(b) Did you have any special reason for going with these people? Yes/No.

If so, could you explain what it was?

9. How much of the Trail did you cover during your last visit?

From to

Have you ever walked it all? Yes/No.

10. (a) Did you go inland from the Trail on your last visit? Yes/No.

(b) Have you ever been inland from the Trail during any other visit? Yes/No.

(c) If yes to either of these, where and why did you go inland?

(d) If your answer to both (a) and (b) was no, was there any special reason why you didn't?

11. Please rank the following features that you saw, related to any others in the country, which you know and which are accessible, on a scale from 1-5, 5 being superb, 1 being very poor. Please circle the appropriate number and append any comments to indicate why you ranked the way you did.

		Very poor					Superb
(a) Scenery, i.e. topographic features	i. intrinsic value	1	2	3	4	5	
	ii. interest	1	2	3	4	5	
(b) Vegetation	i. intrinsic value	1	2	3	4	5	
	ii. interest	1	2	3	4	5	
(c) Wildlife	i. intrinsic value	1	2	3	4	5	
	ii. variety	1	2	3	4	5	
What wildlife did you in fact see?							
(d) The Trail itself	i. variety	1	2	3	4	5	
	ii. condition	Too easy 1	2	Right 3	4	Too Difficult 5	
(e) Numbers of other people		Too Many 1	2	Right 3	4	Too few 5	
(f) Any other things?							

12. Now that you have seen the Trail do you think that there are any features here to which you could not gain access elsewhere in south-west B.C.? (i.e. things you may have mentioned in question 4 and any other additional features)

(a) Scenery: Yes/No. If yes, what?

(b) Vegetation: Yes/No. If yes, what?

(c) A similar Trail; Can you think of a similar trail elsewhere in s-w B.C.? Yes/No.

(d) Wildlife; Yes/No. If yes, what?

(e) Any other characteristics. Yes/No. If yes, what?

13. Did anything disappoint or even upset you? Yes/No.
If yes, what were these things and why did they disappoint you?

What	Why

14. What are your reactions to suggestions that the Trail itself should be rebuilt or improved in any way?

15. There have also been suggestions that access to the area generally should be increased via more roads and/or better roads. What are your thoughts regarding this question?

16. In coming into contact with other users of the Trail:

(a) Did you wish to engage them in conversation? Yes/No.

(b) Were they particularly friendly? Yes/No.

(c) With what proportion did you stop and talk?

(d) Did any particular topics tend to dominate these conversations? Yes/No. If so, what were these?

- (e) Did these contacts add to your enjoyment of the Trail? Yes/No. If so, in what way?

- (f) How many people would you be happy to see in a day on the Trail before numbers would start to decrease your enjoyment of the area?

The next few questions are directed at your recollections and other views of your hike(s).

- 17. (a) Would you like to go to the Trail again or not? Yes/No. Why or why not?

(b) Do you think you will go again or not? Yes/No.

- 18. (a) What would you tell a friend about the area?

(b) Would you encourage him/her to go? Yes/No.

- 19. Do you think your experiences here have changed you in any way, in terms of your attitudes towards wild areas? Yes/No. If yes, in what way?

- 20. You may have heard that the boundaries of the Trail section of the Pacific Rim National Park have not been finalised between the governments of Canada and British Columbia.

(a) What do you know about this?

(b) What are your views?

21. What do you think the area will be like in twenty years' time?

Will you like it as much like this as you do now?
Yes/No.

22. (a) Would you please give your own definition of 'wilderness'.

(b) Do you think the West Coast Trail qualifies as wilderness? Yes/No.

23. Where do you live in B.C.?

24. Would you consent to a personal interview to discuss further some of the points raised in this questionnaire?
Yes/No.

25. Any other comments about the West Coast Trail?

THANK YOU VERY MUCH FOR YOUR TIME AND COOPERATION



SIMON FRASER UNIVERSITY, BURNABY 2, B.C., CANADA
DEPARTMENT OF GEOGRAPHY; 291-3111

Dear

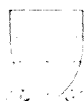
Some while ago I sent you a questionnaire concerning your visit to the West Coast Trail of Vancouver Island. I have not received it back from you. If you are intending to do so, but it has slipped your memory, could I ask you to be kind enough to mail it to me please?

With thanks,

Yours truly,

Graham L. King

GLK:
bb



APPENDIX B

RESULTS FROM QUESTIONNAIRE

QUESTIONNAIRE TO ASCERTAIN VALUES OF THE LIFE SAVING TRAIL

In this first section I would like you to cast your mind back to the time when you made the decision to go to the area of the Life Saving Trail on Vancouver Island, and consider what you may have expected to experience when you made the trip.

A number of respondents gave more than one answer to some questions. Hence replies do not always total 37 (the number of completed questionnaires returned).

1. Your previous experiences of the Trail:

a. How many times had you been before this last time?
0 1 2 3 4 or more

b. When had you been there before (month and year if possible)?

<u>Response</u>	<u>No. of Responses</u>
Never before	23
Once before (Two weeks before: 1 Six months before: 1 One year before: 4 Three years before: 1)	7
Twice before	0
Three times before (in 1966, 1970, 1970: 1 in 1966, 1968, 1969: 1)	2
Four times before (in 1969, 1970, 1970, 1971)	1
More than four times before	4

2. How did you first find out about the Trail? (Please be as explicit as possible)

Friend	22
Media	11
Teacher	4
Outdoor organisation	5
Sierra Club	2

Long residence in B.C.	2
Looking at maps	2
Tourist Information Centre, Burrard Street	1
No reply	1

When

Heard about it and went the same year	16
Heard about it 1 year before going	6
Heard about it 2 years before going	3
Heard about it 3 or more years before going	5
No date (but 4 had been 4 or more times)	6
No reply	1

3. What did you expect to see, before you ever went to the area, in terms a-f below? Please underline the things you particularly wished to see, and please add any other things which may have caused you to go the first time. It may well be that you knew nothing about many of these features, in which case please indicate such.

If one of these sections was left blank in both columns ("knew you would see", and "vague hope you may see"), it was assumed either the respondent had no information or was not interested in that particular item.

An answer of "yes" was assumed to indicate interest, but a lack of more specific information (if answered in the "know" column), or to indicate less thought about their upcoming trip than those who answered with specific information (if answered in either column). If the same answer was given by one respondent in both columns, the answer was reported as if written in the "know" column. However, if both columns were left blank, this fact was reported.

a. History of the area and man-made features; Knew you would see

No answer (2 giving no answer in both "know" and "hope" columns) 8

Yes (2 of which were underlined) 4

No intention of seeing these things 2

The Trail (but presumably more knew of the Trail's existence) 6

Lighthouse(s) 13

Indian villages 6

Cabins of old trail 7

Telegraph line (all of which also mentioned cabins) 4

Suspension bridges 1

Shipwrecks 3

a. History of the area and man-made features: Vague hope you may see

No answer (2 giving no answer in both "know" and "hope" columns) 15

Yes (1 underlined) 2

Few 2

Shipwrecks (1 underlined) 11

Nothing else (respondent knew he would see shipwrecks and lighthouses, and hoped to see nothing else in this category) 1

Indian remains 3

No garbage or other vandalism 2

Japanese floats 2

b. State of maintenance of the Trail itself: Knew you would see

No answer (9 giving no answer in both "hope" and "know" columns)	18
No idea	2
It was not important what it was like	1
Yes	2
Interesting	2
Poor, rough, overgrown	7
Reasonable in parts, improvement needed in others	2
No surprises, well briefed	1
Trail infrequently used	1
Mentioned rough aspects, but "they made it all the more exciting and interesting"	1

b. State of maintenance of the Trail itself: Vague hope you may see

No answer (9 giving no answer in both "hope" and "know" columns)	22
Yes	1
Better bridges than existed	3
Expected it to be poor, but found it much better than expected	2
Neglected trail, not too much "improvement"	1
Good, easy well-maintained trail	3
Expected it to be better than it was	2
Expected it as it was	1
More interesting than a wheel-chair run! Didn't expect good trail - in places bad!	1
A very rugged trail which would pass near the beach and through a variety of environments.	1

c. Vegetation: Knew you would see

No answer (all answered in "hope" column) 3

Yes (5 underlined) 7

Heavy, wet, swamp, "typical west coast
stuff" (4 underlined) 24

Answered similarly but admitted not knowing
too much (underlined) 1

Big trees 2

c. Vegetation: Vague hope you may see

No answer (all fairly certain in "know"
column) 25

Yes 1

Had not really realised what climax
forest was like, though they had been
told what to expect 2

Giant Douglas and other large virgin
timber (1 underlined) 3

Mushrooms, orchids, wildflowers, berries
(1 underlined) 4

More dense than it was 1

Different from central B.C. 1

Hoped to be able to cook things off beach 1

d. Scenery: Knew you would see

No answer (all answered in "hope" column) 3

Yes 9

Beautiful, spectacular (1 underlined) 3

Various coastal features (generally
mentioned in some detail)(5 underlined) 19

Well informed (mentioned particular
features by name) 2

<i>Solitude, remoteness of unspoiled nature</i>	1
<i>Waterfalls</i>	2
d. Scenery: Vague <u>hope</u> you <u>may</u> see	
<i>No answer (all answered in "know" column)</i>	26
<i>Various coastal features (1 underlined)</i>	5
<i>Waterfall abruptly over cliff edges (Tsusiast Falls)(2 underlined)</i>	2
<i>Shipwrecks</i>	1
<i>Paradise</i>	1
<i>Clear weather</i>	1
<i>100 million times better than had dreamed of (reaction to what had been seen)</i>	1
e. Wildlife: <u>Knew</u> you <u>would</u> see	
<i>No answer (1 gave no answer in both "know" and "hope" columns)</i>	14
<i>None (answered in "hope" column)</i>	1
<i>Yes (underlined)</i>	1
<i>Pretty good</i>	1
<i>Not much, birds (3 underlined)</i>	13
<i>Sea-lions (2 underlined)</i>	5
<i>Eagles</i>	1
<i>Sea-life in pools</i>	4
<i>Squirrels</i>	2
<i>Sea-mammals</i>	1

e. Wildlife; Vague <u>hope</u> you <u>may</u> see	
No answer (1 gave no answer in both "know" and "hope" columns)	5
Yes (1 underlined)	7
Sea-lions (4 underlined)	10
Just hope to see anything (1 mentioned this, but said this aspect was not too important)	4
Whales (3 underlined)	5
Other sea-mammals (incl. sea otters, mink)	7
Cougar, bear and other large game (1 underlined and 1 said "bear but not too close")	10
Birds (especially eagle)	4
f. Other people. Did you expect to see any or many other people?: <u>Knew</u> you <u>would</u> see	
No answer (2 gave no answer in both "hope" and "know" columns)	20
No	6
Yes	3
A few	7
Didn't consider this	1
f. Other people. Did you expect to see any or many other people?: Vague <u>hope</u> you <u>may</u> see	
No answer (2 gave no answer in both "hope" and "know" columns)	13
Yes	1
No one	7
Not many (1 went intentionally early or late in season 1 expected and hoped not many 2 expected not many 3 hoped not many)	7

<i>Saw more than expected</i>	4
<i>Expected to see some (but I hoped not to)</i>	3
<i>Hoped to meet some Indians</i>	1
<i>50 or so</i>	1
<i>Other classes (biology) like our own, though we didn't think many people would be there</i>	1
<i>Expected area to be quiet</i>	1
<i>Expected to meet some, though not looking forward to it - surprisingly enough we met some fantastic people</i>	1

4. In deciding to visit the Trail did you expect to do or see anything which would not have been possible elsewhere in south-west B.C.? Yes/No. If so, what were these things?

<i>Yes</i>	32
<i>No</i>	5

31 "yes" respondents gave quite detailed and varied reasons:

<i>Solitary and unpopulated (I said "unlike Long Beach")</i>	5
<i>Rugged coastline, beautiful scenery</i>	21
<i>Wilderness and virgin forest</i>	13
<i>"The trail"</i>	9
<i>Sea life (especially rock pools)</i>	6

Typical "yes" responses were:

"To walk more or less on the level, in a relatively unpeopled area, with a beautiful and unique combination of scenery (sea and land and sky) and vegetation - glorious car-free quietness and spiritual peace!"

"Coast with little construction; we were looking for all that you can't see on the public beaches of developed areas."

3 "no" respondents still commented as follows:

<i>Recreational life</i>	<i>1</i>
<i>Had worked on the coast on a boat and knew the area from a "sailor's point of view"</i>	<i>1</i>
<i>Had been more than four times</i>	<i>1</i>

5. Please mention any special reasons you may have had for going the last time you went, if you have been more than once.

<i>No response (none had been before)</i>	<i>23</i>
<i>Wanted to see more of the area and introduce others</i>	<i>11</i>
<i>Sea lions</i>	<i>3</i>

Typical responses were:

"To share the sea with a close friend"

"Just to hike and see more of the area"

This section of the questionnaire poses questions about your experiences and feelings during the time you have spent in the area.

6. How have you got to and from the area of the Trail, once you have got to Vancouver Island, on the various visits you have made?

<i>Car</i>	<i>34</i>
<i>Boat</i>	<i>4</i>
<i>Canoe</i>	<i>1</i>
<i>Chartered boat from Nitinat Indians</i>	<i>1</i>

7. How many nights did you spend there on your last visit?

<i>No nights</i>	2
<i>One night</i>	4
<i>Two nights</i>	10
<i>Three nights</i>	9
<i>Four nights</i>	4
<i>Five to Eight nights</i>	3
<i>Nine or more nights</i>	5

Average length of visit: 3.7 nights

*Mode: 2 nights, (but this had 10 entries,
3 nights had nine, so very close)*

8. a. How many people were there in your party on your last visit? 1 2 3 4 or more?

<i>One to three people</i>	8
<i>Four people</i>	12
<i>Five to six people</i>	8
<i>Eight to twelve people</i>	5
<i>Thirteen to twenty people</i>	4

Average party size: 6 people

Mode: 4 people

b. Did you have any special reason for going with these people? Yes/No. If so, could you explain what it was?

<i>Yes</i>	35
<i>No</i>	0
<i>No response (both went alone)</i>	2

33 respondents gave detailed reasons:

<i>friends with similar interests, family</i>	30
<i>Sierra Club</i>	3

Typical responses were:

"Friends who also enjoy backpacking"

*"Girl with whom I wanted to share ocean
wilderness experience"*

*"Victoria Sierra Club arranged hike
(for 20) to show what we were
trying to help save"*

9. How much of the Trail did you cover during your last visit?
From to

*This question was asked in order to relate it to other
answers. Refer to No. 14.*

Have you ever walked it all? Yes/No

<i>Yes</i>	8
<i>No</i>	29

10. a. Did you go inland from the Trail on your last visit?
Yes/No

<i>Yes</i>	4
<i>No</i>	32
<i>No response</i>	1

b. Have you ever been inland from the Trail during any
other visit? Yes/No

<i>Yes</i>	6
<i>No</i>	30
<i>No response</i>	1

c. If yes to either of these, where and why did you go inland?

<i>Examine forest and vegetation better</i>	4
<i>Try to locate an old trail</i>	1
<i>See a lake</i>	1
<i>Curiosity</i>	1

d. If your answers to both a. and b. were no, was there any special reason why you didn't?

<i>See and trail main attraction</i>	14
<i>Time</i>	14
<i>Difficult to get in</i>	11
<i>No desire</i>	2
<i>Fear of being lost</i>	2
<i>Weather</i>	2
<i>No particular reason</i>	2
<i>Forest not attractive</i>	1
<i>Hope to in the future</i>	2

11. Please rank the following features that you saw, related to any others in the country, which you know and which are accessible, on a scale from 1-5, 5 being superb, 1 being very poor. Please circle the appropriate number and append any comments to indicate why you ranked the way you did.

		Very poor					Superb
		1	2	3	4	5	
a. Scenery, i.e.	i. intrinsic	1	2	3	4	5	
topographic features	value	0	1	5	8	21	
	ii, interest	1	2	3	4	5	
		0	0	4	13	19	
<i>No response to i.</i>							2
<i>No response to ii.</i>							1
<i>Average response to i.</i>							4.4
<i>Average response to ii.</i>							4.4

b. Vegetation	i. intrinsic	1	2	3	4	5	
	value	0	1	7	15	12	
	ii, interest	1	2	3	4	5	
		0	1	10	16	9	
<i>No response to i.</i>							2
<i>No response to ii.</i>							1
<i>Average response to i.</i>							4.1
<i>Average response to ii.</i>							3.9

c. Wildlife	i. intrinsic	1	2	3	4	5	
	value	3	2	5	4	19	
	ii. variety	1	2	3	4	5	
		3	6	8	10	6	
<i>No response to i.</i>							4
<i>No response to ii.</i>							4
<i>Average response to i.</i>							4.0
<i>Average response to ii.</i>							3.3

What wildlife did you in fact see?

All who valued below 3 (and some who valued 3) saw none, little, or just birds

d. The Trail itself	i. variety	1	2	3	4	5
		0	1	7	13	11
		Too Easy		Right	Too Difficult	
	ii. condition	1	2	3	4	5
		0	2	23	7	3

No response to i. 6

No response to ii. 2

Average response to i. 4.2

Average response to ii. 3.3

Comments:

"Very dangerous in places" (4-5 for difficulty)

"Hard to say: some people like myself like the hardest bits best"

"Poor condition, but super - may have been too difficult further on"

"N.B. one of the few trails which doesn't become boring after the first trip"

"Trail very rugged and should remain so"

"Good - enough variety and difficulty which will discourage hordes of people"

e. Numbers of other people	Too Many	Right	Too Few		
	1	2	3	4	5
	8	7	20	2	0

No response 0

Average response 2.4

Comments:

"Always avoided area in summer"

"People yelling at sea lions"

"Area would be destroyed by too many people (100-200 p.a.)"

"Large groups detract from experience"

"The fewer the better"

"Not many in absolute nos, nor ecological effect,
but reasons of solitude, etc."

f. Any other things?

<u>Response</u>	<u>No. of Responses</u>
Vehicles should be banned except by maintenance men	2
Rivers and camping areas great. Lots of wood for fire and shelter	1
On trail itself more improvement means more people and I'm too selfish	1
Trail should be made safe, but not a Stanley Park picnic	1
Unique combination of factors makes the area marvellous	1

12. Now that you have seen the Trail do you think that there are any features here to which you could not gain access elsewhere in south-west B.C.? (i.e. things you may have mentioned in question 4 and any other additional features)

1 respondent gave no answers to this question indicating she lacked sufficient information to make a valid judgement.

a. Scenery	Yes/No	If yes, what?	
Yes			25
No			10
No response			2

24 gave detailed replies:

Mentioned some aspect of scenery 24

Wilderness and uninhabited nature of it 4

Typical responses were:

"Topography: unique sandstone cliffs, tidal shelf, unique beach areas where rivers flow to the sea. View from cliffs of ocean. Reversing effect of Nitinat.Tsusiat Falls"

"Standing at the top of a cliff and seeing the waves splashing and foaming below. Being in the middle of a suspension bridge and seeing what's below you (if you have the courage)"

"Nowhere else is there a place with a maintained trail through virgin forest with views of the sea, rocky coast, etc."

"Combination in one small area of things that are found elsewhere individually but not altogether - beaches, open sea, waterfalls, tidal pools"

"Long wild sections of uninhabited beaches and cliffs, tidal pools...."

b. Vegetation	Yes/No	If yes, what?
Yes		18
No		14
No response		5

16 gave detailed replies:

Virgin forest of west coast 8

Nothing like I've ever seen before elsewhere in B.C. 4

Variety 3

Inaccessible elsewhere 1

Typical responses were;

"Coastal cedar climax forest in this area is unique and uniquely close to big population centres"

"Not accessible elsewhere"

"It is a real rain forest, unlike any that I've ever seen on other parts of the Island or on the Gulf Islands, and the climate in other parts of B.C. isn't the same"

c. A similar Trail: Can you think of a similar trail elsewhere in s-w B.C.? Yes/No

Yes 3

No 32

No response 2

All of the "yes" respondents suggested a similar trail:

Long Beach (1 said he had not been there) 2

Toquart Bay 1

1 "no" respondent answered:

Not along Pacific coast (i.e. unique location)

d. Wildlife Yes/No If yes, what?

Yes 13

No 16

No response 8

13 gave detailed replies:

Sea lions 10

General variety of marine life 4

Whales 3

Typical responses were:

"Sea lions, exciting to watch so close,
know of nowhere else as close and
easy to see"

"Sea anemones and other aquatic life
seems more plentiful than elsewhere"

e. Any other characteristics	Yes/No	If yes, what?
Yes		11
No		9
No response		17

11 gave detailed replies:

Remoteness and lack of people	6
Weather (favourable to the rain)	2
Lack of pollution	2
Unique lake complex behind, very interesting from geomorphologic point of view....	1
All features so well packed together and accessible	1
The setting of the Trail: its 'one way' characteristic - no need to retrace	1
Difficult to describe how all the features fit together to make a valuable wilderness experience	1

13. Did anything disappoint or even upset you? Yes/No
If yes, what were these things and why did they
disappoint you?

Yes	26
No	6
No response	5

26 gave detailed replies:

<u>Response</u>	<u>Reason</u>	<u>No. of Responses</u>
Garbage	Ugliness, very bad, doesn't fit into natural environment	7
Trail bikes	Shouldn't be allowed in wilderness! Cut up trail and noise	6
Noisy people	Disturbing - I went there for peace and quiet	3
Too many people	Overpopulation	2
Forest damaged	Want to see it left alone	2
Cabins damaged	Vandalism	2
State of bridges	Dangerous	2
That I couldn't stay longer	Obligations	1
Thinking of the damage <u>I</u> was causing by walking along the shelf crushing inter- tidal vertebrates and thinking of the consequences of hundreds doing the same thing		1
Condition of Trail south of Pachena Lighthouse	? Too difficult	1
That many people didn't go on a trip like this	Because it's beautiful!	1

14. What are your reactions to suggestions that the Trail itself should be rebuilt or improved in any way?

<u>Amount Walked</u>	<u>Response</u>	<u>No. of Responses</u>
From Pachena village as far as Klanawa River or more (i.e. at least one third of the total Trail)	Yes, quite a bit, but keep as footpath only	3
	Minimal to remove danger, no more than this as challenge will be removed	13
	No, will ruin challenge and let too many people in (2 disagreeing very strongly)	6
From Pachena village to somewhere between Pachena Lighthouse and the Klanawa River (i.e. more than 6 but less than 20 miles each way)	Yes (1 agreeing strongly, though only for hiking. 1 wanted only a medium amount of improvement)	2
	A small amount, especially bridges	3
	No (3 disagreeing strongly)	7
From Pachena village to Pachena Lighthouse (i.e. 6 miles each way along the part maintained until 1971 by Dept. of Transport)	Yes, good idea	2
	River crossings only, otherwise no	2

15. There have also been suggestions that access to the area generally should be increased via more roads and/or better roads. What are your thoughts regarding this question?

<u>Response</u>	<u>No. of Responses</u>
<i>Disagreement to the idea of any improvements at all</i>	18
<i>Strong disagreement to the idea of any improvements at all - improvement would bring more people and destroy the very qualities of the area they came to seek</i>	16
<i>Compared this area favourably against Long Beach which they thought had been spoiled by the combination of too easy access and too much publicity</i>	3
<i>Access to a half way point for those not wanting to walk all the Trail</i>	1
<i>Access to the termini could be improved without hurting, but not elsewhere</i>	1
<i>Strong agreement to improving access to termini and suggested building "marshalling areas at each end for hikers"</i>	1

The response which contained all the most typical feelings and expressions is as follows:

"I think access is sufficient now. If roads are improved to any extent, this will make the area much too easy to get to leading eventually to unaesthetic crowds as at Long Beach. Access even now is too easy, since campsites were filled when we spent our first night at Pachena Bay. Although I want people to be aware of the natural beauty of the West Coast, I think that having some restraint, such as restricted hours on the logging road (I realise this is necessary because of the logging trucks) will make it possible only for those to get there that are really interested in the Trail and area themselves, not just for somewhere to go."

16. In coming into contact with other users of the Trail;

(a) Did you wish to engage them in conversation? Yes/No

<i>Yes</i>	27
<i>No</i>	2
<i>No response</i>	1
<i>Sometimes</i>	3
<i>Depends how they act</i>	2
<i>Don't mind</i>	1
<i>Not often</i>	1

(b) Were they particularly friendly? Yes/No

<i>Yes</i>	32
<i>No</i>	0
<i>No response</i>	1
<i>Average</i>	3
<i>Usually</i>	1

(c) With what proportion did you stop and talk?

<i>All (75% to all)</i>	18
<i>Few (Less than 25%)</i>	6
<i>Half</i>	5
<i>Most (half to 75%)</i>	5
<i>No response</i>	3

(d) Did any particular topics tend to dominate these conversations? Yes/No. If so, what were these?

<i>Yes</i>	27
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<i>No</i>	<i>9</i>
<i>No response</i>	<i>1</i>
<i>27 answered what these were:</i>	
<i>State of the Trail</i>	<i>18</i>
<i>Miscellaneous</i>	<i>16</i>
<i>How far travelled and travelling</i>	<i>9</i>
<i>Weather</i>	<i>7</i>
<i>Wildlife</i>	<i>5</i>
<i>Preservation of the area</i>	<i>3</i>
<i>1 "no" respondent answered:</i>	
<i>"There were no social pressures"</i>	
<i>(e) Did these contacts add to your enjoyment of the Trail?</i>	
<i>Yes/No. If so, in what way?</i>	
<i>Yes</i>	<i>28</i>
<i>No</i>	<i>5</i>
<i>No response</i>	<i>1</i>
<i>Yes and No (sometimes)</i>	<i>1</i>
<i>Not really</i>	<i>2</i>
<i>27 answered "in what way":</i>	
<i>To discover people with an interest in common with oneself</i>	<i>11</i>
<i>Reassuring to find people think and appreciate scenery the same as oneself</i>	<i>8</i>
<i>Nice people</i>	<i>5</i>
<i>Useful comments on trail</i>	<i>5</i>
<i>Miscellaneous</i>	<i>4</i>

(f) How many people would you be happy to see in a day on the Trail before numbers would start to decrease your enjoyment of the area?

<i>2-4 Small Parties</i>	<i>7</i>
<i>10-20 People</i>	<i>7</i>
<i>3-10 People (one respondent said "more and trail would be a quagmire and campsites occupied")</i>	<i>5</i>
<i>1-3 People</i>	<i>3</i>
<i>Groups three times apart</i>	<i>1</i>
<i>One party of six people</i>	<i>1</i>
<i>20 in the northern half, 5 in the southern half</i>	<i>1</i>
<i>20-30 people</i>	<i>1</i>
<i>40 people (difficult to estimate)</i>	<i>1</i>
<i>20 quiet ones or one loudmouth</i>	<i>1</i>
<i>Difficult to say - column of 100 hikers would not be as much out of place as a yelling mob of 20</i>	<i>1</i>
<i>Can't put figures on it. Generally I'm content to see no one on the Trail. But tolerance, without anything but temporary disappointment, may involve 1 or 2 small parties</i>	<i>1</i>
<i>Just so I can camp away from people and hike during the day without running into lots of them</i>	<i>1</i>
<i>We would not like to lose wilderness feeling by becoming too crowded</i>	<i>1</i>
<i>Hard - if any more, would be a jam-up</i>	<i>1</i>
<i>I don't think it would matter so long as people didn't destroy the trail or start building houses on the beach</i>	<i>1</i>
<i>No response</i>	<i>3</i>

The next few questions are directed at your recollections and other views of your hike(s).

17. a. Would you like to go to the Trail again or not? Yes/No

Yes 36

No (not southern portion - too dangerous) 1

Why or why not?

Like the area 14

Walk the rest 11

Revisit, see more places and places of particular interest, spend more time there 8

Challenge and effort 5

Peaceful, wilderness experience 3

Sleeping out on the beach 2

Change from usual life style 2

Close to home 1

Would know what hazards to avoid 1

Informative 1

b. Do you think you will go again or not? Yes/No

Yes 33

No 1

No response 1

Hope so 1

Hard to say 1

18. a. What would you tell a friend about the area?

<i>Beautiful scenery</i>	15
<i>Well worth the trip to the Pacific coast, good hike along an interesting trail beside the ocean</i>	9
<i>What to take</i>	8
<i>Quiet and peaceful, lack of people (one said "less people than Long Beach")</i>	5
<i>Warn of dangers</i>	5
<i>Very favourable</i>	5
<i>Miscellaneous (when to go, direction to go, beautiful air, history, too many people, easy walk from Pachena to Michigan Creek)</i>	5
<i>Rewarding experience, mentally and physically</i>	4
<i>About the vegetation</i>	3
<i>Take plenty of time</i>	2
<i>Good area to hike if experienced</i>	2

b. Would you encourage him/her to go? Yes/No

<i>Yes</i>	33
<i>No</i>	0
<i>Reserved answer</i>	4

*All of those giving a reserved answer and
7 "yes" respondents had reservations
depending on the personality and
capabilities of the friend*

19. Do you think your experiences here have changed you in any way, in terms of your attitude towards wild areas? Yes/No. If yes, in what way?

Yes 18

No 15

No response 4

18 answered "in what way":

They should not be improved or made easy of access (1 was very adamant) 8

More aware of my own appreciation 6

More aware of the variety of trails and areas existing 2

Wish there were more areas like this around - we've got the land in Canada 1

Discovered awareness that true wilderness, i.e. no trails, may not be as pleasurable as areas man has affected, but in "acceptable ways" 1

The most detailed answer was as follows:

"Perhaps my experiences have mainly made me realise that no one area is better than another. I cannot say that I like the West Coast Trail better than hiking or climbing in the mountains and glaciers; I enjoy both equally. In this way I think I am appreciating each area as just a part of the many different aspects and interpretations of wilderness. If any one wilderness area were totally destroyed, no other area could really make up for it - something would be lost that could not ever be replaced."

20. You may have heard that the boundaries of the Trail section of the Pacific Rim National Park have not been finalised between the governments of Canada and British Columbia.

a. What do you know about this?

<i>Considerable amount</i>	20
<i>No response or indication of knowing nothing</i>	7
<i>Small amount</i>	6
<i>Very little</i>	4

b. What are your views?

<i>Boundaries should include a much wider buffer zone for the whole Trail area for reasons of ecology and prevention of too easy access (unstated distance)</i>	20
<i>Should preserve the Nitinat Triangle</i>	10
<i>Boundaries should include a much wider buffer zone for the whole Trail area for reasons of ecology and prevention of too easy access (2-3 miles wide)</i>	2
<i>Boundaries should include a much wider buffer zone for the whole Trail area for reasons of ecology and prevention of too easy access (at least 5-10 miles)</i>	2
<i>Boundaries should include a much wider buffer zone for the whole Trail area for reasons of ecology and prevention of too easy access (at least 5 miles)</i>	1
<i>Logging may be permitted providing the quarter mile and river and lake shores are left intact</i>	1

Typical answers are as follows:

"I do not want the area to be logged. Neither do I want it to become ruined by tourists. I hope it is LEFT ALONE"

"B.C. Government selling out to logging concerns and is wasting some valuable wilderness. If logging is allowed right up to the RIM, then much of the beauty of the area would be destroyed. If the watershed is affected the area will become difficult for camping (water) and attractiveness of the wilderness will be lost when you know that half a mile away some ass is power-sawing away"

"I believe as much should be incorporated as possible for these reasons:

- i. need ecological and aesthetic buffer
- ii. provide greater recreation opportunities"

"I believe that the park should be as wide, big as possible. Area will be invaluable as a park in a few years' time"

"It would be nice to have a 2 or 3 mile limit"

21. What do you think the area will be like in twenty years' time? Will you like it as much like this as you do now? Yes/No

Yes (2 of which were reserved) 6

No 25

Reserved 2

Did not answer yes or no although all commented 4

35 gave detailed replies:

Overcrowded (none of whom would like it as much like that as now) 16

Commercialised and Trail spoiled by improvements from being incorporated into National Park and too much access. (All except one indicated they would not like it as much in twenty years, as now. The one exception did not answer yes or no to this second park of the question) 16

An objectionable amount of logging (one of whom said "pessimistically logged", but indicated she would like it as much. The rest indicated they would not) 9

Hopefully the same as now (four indicated they would like it then as much as now. The fifth reply was "Hopefully the same. In actuality probably many more people". In view of this qualification respondent indicated he would not like it as much in 20 years as now) 5

Trail would be improved, and other management for hikers (all indicating it would be as enjoyable in 20 years' as now) 3

Typical answers, all except 7 of which were pessimistic, were as follows:

"Similar conditions to Black Tusk, i.e. double wheel-chair width trail and large numbers of people at holiday times" (no)

"Probably destroyed as wilderness"(no (hell))

"Overused, polluted and commercialised" (no)

"Crowded with Americans" (no)

"I hate to think of it.....probably a well-manicured trail, all black topped, but I hope not" (no)

"Probably awful unless conservationists make their views felt now. Or possibly just like any other well-ordered park - rather boring and of course fees at recognised campsites" (no)

"If preserved and managed sensibly it would have garbage pits, campsites (wilderness), improvements in Trail, Indian visitors centre(s) at Clo-oose (and elsewhere?), boat service on Nitinat Lake and at Nitinat Narrows" (yes - if not - no)

22. a. Would you please give your own definition of wilderness.

b. Do you think the West Coast Trail qualified as wilderness? Yes/No

Yes

23

No

6

Some of it	3
10 feet away from the Trail	2
Most of it	1
Sort of	1
Marginal	1

Typical "yes" responses were:

"Area difficult of access, little contact with outside world and still very much as it was before the arrival of modern man" (yes)

"Having a campsite of your own and seeing no more than five people a day and little signs of man's activities" (yes)

"Few people, access only by trail, no motor vehicles, basically untouched environment" (yes - now)

6 "no" respondents commented as follows:

An area completely uninfluenced by man and his actions (one added "Not really - but some parts are pretty close to it." And another: "Not by my definition, but that doesn't mean that it isn't a good experience") 5

Rough, wild, no lodges, no trails, no people, plenty of trees, "untouched" eco-system, no lodges, just you and a map! 1

23. Where do you live in B.C.?

Vancouver area	19
Small settlements on Vancouver Island	6
Cariboo	5
Victoria area	5
Revelstoke, Penticton	2

24. Would you consent to a personal interview to discuss further some of the points raised in this questionnaire? Yes/No. If so, please write your name and address.

Yes 33

No (2 indicating they would be away for the Summer period) 4

25. Any other comments about the West Coast Trail?

18 respondents gave no further comment on the rest of the questionnaire. The 19 replies which were given covered a variety of topics and generally reinforced and elaborated opinions which had been given earlier. One offered a considerable amount of information concerning property ownership at Clo-oose.

Elaboration of impressions received there, indication of desire to return 8

Request for more area to be preserved, and access to be limited to keep out large numbers of people which will damage the ecology 7

Suggestions of management to increase capacity and prevent damage to area and users 6

Don't let it become commercialised and popularised even as a national park. Impression given of this being "one of the last few places left" 3

New information (Clo-oose) 1

Unfortunately ... multiple use will come and multiple use in the Nitinat Triangle will spoil the West Coast Trail 1

BIBLIOGRAPHY

- British Columbia Statutes, 1969, "An Act to authorise the establishment of a national park on Vancouver Island," April 2, 1969, Chapter 41.
- British Columbia Wildlife Federation, 1972, Parks Committee Report: Nitinat Triangle, Sixteenth Annual Convention, Richmond, B.C., May 3-6, 1972.
- Brockman, C.F., 1959, Recreational use of wildlands, New York, McGraw-Hill.
- Campbell, F.L., 1970, "Participant observation in outdoor recreation," J. of Leisure Research, 2(4) Fall, 1970, pp. 226-236.
- Careless, R., Fumalle, M., Scott, G., Smith, M. & van Leusden, P., 1971, "Public participation in the decision making process: a study of the West Coast Trail," Unpublished Report, Department of Geography, University of Victoria.
- Carhart, A.H., 1961, Planning for America's wildlands, Harrisburg, Penn., National Audubon Society, National Parks Association, Wilderness Society, Wildlife Management Institute.
- Clawson, M., 1959, "Methods of measuring the demand for and value of outdoor recreation," RFF ReprintNo. 10, February, 1959.
- _____, 1963, Land and water for recreation, Chicago, Rand McNally & Co.
- Clawson, M. & Knetsch, J., 1963, "Outdoor recreation research," Natural Resources J., 3(2), pp. 250-275.
- Davidson, P., Adams, F.G. & Seneca, J., 1966, "The social value of water recreational facilities resulting from an improvement in water quality: the Delaware Estuary," in Water Research, Kneese, A.V. & Smith, S.C. (eds.), for R.F.F. by Johns Hopkins Press, Baltimore.
- Davis, R.K., 1963, "Recreation planning as an economic problem," Natural Resources J., 3(2), pp. 239-249.
- Hamilton, J., 1967, "Memories of a West Coast lineman," The Islander, Victoria Daily Colonist, August 13, 1967.

- Hunter, B., 1972, Vancouver Sun, May 25-26, 1972.
- King, G.L., 1972, "Wilderness management: problem of survival of a resource," M.A. extended paper, Department of Geography, Simon Fraser University.
- Kneese, A.V. & Nobe, K.C., 1962, "The role of economic evaluation in planning for water resource development," Natural Resources J., 2(3), pp. 445-482.
- Knetsch, J.L. & Davis, R.K., 1966, "Comparisons of methods for recreation evaluation," in Water Research, Kneese, A.V. & Smith, S.C. (eds.), for RFF by Johns Hopkins Press, Baltimore, pp. 125-142.
- Krutilla, J.V., 1967(a), "Conservation reconsidered," American Econ. Rev., 57(4), pp. 777-786.
- _____, 1967(b), "Some environmental effects of economic development," Daedalus, 96(4), Fall 1967, pp. 1058-1070.
- _____, 1971, "Evaluation of an aspect of environmental quality: Hells Canyon revisited," RFF Reprint No. 93.
- Leopold, A., 1949, A sand county almanac, New York, O.U.P.
- Lewis, G., 1970, "Hiking the West Coast Trail," B.C. Outdoors, Vol. 26, May-June, 1970, pp. 16-20.
- Lucas, R.C. & Oltman, J.L., 1971, "Survey sampling wilderness visitors," J. of Leisure Research, 3(1), Winter 1971, pp. 28-43.
- Merewitz, L., 1966, "Recreational benefits of water resource development," Water Resources Research, 2(3), 1966, pp. 625-646.
- Moncrief, L.W., 1970, "Trends in outdoor recreation research," J. of Leisure Research, Vol. 2, pp. 127-130.
- Murray, H., 1971, "Pacific Rim - what sort of a park?" Park News, 7(3), pp. 10-16.
- Myles, D.V., Hirvonen, R., Embleton, T.F.W. & Toole, F.E., 1971, "An acoustical study of machinery on logging operations in Eastern Canada," Canadian Forestry Service, Department of Forestry, Ottawa.

National & Provincial Parks Association of Canada, 1971,
Parks for tomorrow, 1(3), October, 1971.

National & Provincial Parks Association of Canada, 1971,
Parks for tomorrow, 1(6), April, 1972.

Nicol, J.I., 1970, "The national park movement in Canada,"
in Canadian Parks in Perspective, Nelson, J.G. (ed.),
based on conference, Calgary, October 1968,
Montreal, Harvest House, pp. 19-34.

O'Riordan, T., 1971, Perspectives on resource management,
London, Pion. Manuscript copy, Department of
Geography, Simon Fraser University, 1970.

O'Riordan, T. & Keogh, B., 1972, "The tragedy of the
recreational commons," mimeo, Department of
Geography, Simon Fraser University.

Patterson, R.W., 1967, "The Act of the impossible," Daedalus,
96(4), Fall 1967, pp. 1020-1033.

Pearse, P.H., 1968(a), "A new approach to the evaluation of
non-priced recreational resources," Land Econ.,
44(1), pp. 87-99.

_____, 1968(b), "Water based recreational demands,"
in Forecasting the demands for water, Sewell, W.R.D.,
& Bower, B.T. (eds.), Ottawa, Queen's Printer,
pp. 161-203.

_____, 1969, "Toward a theory of multiple use: the case
of recreation versus agriculture," Natural Resources
Journal, 9(4), pp. 561-575.

Scott, R.B., 1969, "West Coast Trail could give access to
sandy Keah Beach," The Islander, Victoria Daily
Colonist, June 1, 1969.

_____, 1970, "Breakers ahead! A history of shipwrecks
on the Graveyard of the Pacific," Sidney, B.C.,
Review Publishing House.

Seckler, 1966, "On the uses and abuses of economic science
in evaluating public outdoor recreation," Land
Econ., 42(4), pp. 485-494.

Sierra Club, N.D.? 1970, "Brief on phase three, West Coast
National Park," presented by The Sierra Club of
B.C., Victoria Section.

Sierra Club, 1971, "A plea for Canada's Life Saving Trail,"
West Vancouver, Sierra Club of B.C.

Vancouver Sun, September 16, 1970; March 17, 1972.

Victoria Daily Colonist, March 9, 1972; March 16, 1972.

Wennergren, E.B., 1964, "Valuing non-market priced recreational
resources," Land Econ., 40(3), pp. 303-314.

Wildavsky, A., 1967, "Aesthetic power or the triumph of the
sensitive minority over the vulgar mass: a political
analysis of the new economics," Daedalus, 96(4),
Fall 1967, pp. 1115-1128.

Wollman, N., 1967, "The new economics of resources," Daedalus,
96(4), Fall 1967, pp. 1099-1114.

Yeomans, W.C., "Threats to the leisure potential of the
mountain-coastal landscape," Canadian Audubon,
32(1), January-February, 1970, pp. 9-11.

