

PART 2: THE ENVIRONMENTAL MANAGEMENT CHARGE

2.1 Development of the EMC

In April 1988 the Great Barrier Reef Ministerial Council, which facilitates the operation and funding of the Authority, in response to the Authority's increasing costs of administration, asked it to investigate the feasibility of imposing charges on commercial users. Further, in February 1991 the Council indicated that general tax payers should not be the only people financially supporting the costs of Marine Park management and that charges should be imposed on users.

An important factor influencing the introduction of the EMC was the fact that in the years prior its introduction, the use of the Marine Park had been increasing at the rate of 8% per annum, particularly in the form of tourism. It was perceived that more funds were needed to enable increased research on the impact of use of the Marine Park, to educate users about the Marine Park and their impact, and to make more effective management plans possible. It was also perceived that public opinion supported the idea that users of the Marine Park should contribute to the costs of its management.

Later in the development of the concept of the EMC, this approach was extended to include a charge on private boat users of the Marine Park (there were about 36,000 private boats registered in coastal towns and cities between Bundaberg and Cooktown in 1991 (ABARE 1991, p. 16)). After a Ministerial agreement that these users should be charged, and only 18 months before it was to come into effect, the Premier of Queensland announced that he did not approve of it and that the Queensland Government would not cooperate in its collection. The least cost method of collecting the charge was to add it to the already existing Queensland Government registration fee on private boats. The administrative costs of this method would have been minor, and this was important given the fact that the intended charge was small. The refusal of the Queensland Government to cooperate meant that the most cost effective way of collecting the charge was unavailable and so a charge was not applied to private boat owners.

Very extensive public consultations with tourism operators were undertaken before the introduction of the EMC. In addition, meetings were held with the Australian Tourism Industry Association (ATIA), the Far North Queensland Promotion Bureau, and the Great Barrier Reef Consultative Committee. The Association of Marine Park Tourism Operators (AMPTO) was established in this period to represent EMC payers and extensive negotiations were undertaken with it.

In June 1992, the Minister for the Environment, Sport and Territories announced that in July 1993 the charge would be imposed on commercial tourism operators in the Marine Park. After this announcement, two options for the EMC were proposed:

- (a) one based on a percentage of the carrying capacity of an operator's boat and frequency of operation in the Marine Park, and
- (b) one based on the number of passengers carried.

Further extensive consultations were undertaken, mainly for the purpose of determining which of these options the industry preferred. All Marine Park tourism operators were contacted by mail and a number of public meetings were held from Port Douglas to Brisbane. The majority of operators preferred option (b) even though it was going to require greater administration on their part. Having decided this, further meetings were held to explain the proposed structure and to obtain feedback from operators. Separate meetings were held with mariculture and sewage discharge permittees to discuss charges on them.

The EMC came into effect on 1 July 1993 and the charge on sewage discharge a month later, due to late changes to the legislation. Longer term (six year) permits and transferability of permits were also introduced at this time which provided benefits for operators.

The Authority decided to have an independent review conducted of the EMC after one year of operation (this review)

2.2 Principles of charging for resource use

2.2.1 General principles

The modern economic debate on resource use concentrates on two principles which are found in the economics literature variously known as "welfare economics", "economic efficiency" or "microeconomic reform".

The first principle is called *user pays*. This term is now used commonly and is often used incorrectly to mean the setting of charges so as to recover the total costs of the organisation controlling the resource in question. These are the wrong costs and the relevant costs on which to base charges are the costs to society of the particular use of the resource. Correctly stated, user pays is a charging system in which *users pay prices equal to the "social costs" (true costs to society including both private and external costs) of using the resource.*

When applied to financing the management of the Marine Park the doctrine suggests:

Every person directly causing costs in the form of monitoring and other administrative costs, damage or threat of damage to the Marine Park, and crowding, should be required to pay those costs in the form of charges ("user pays charges") imposed on the actions which cause those costs to be incurred. For example, the administrative costs associated with the processing of a permit should be recovered by a permit processing charge, acts of pollution in the form of sewage discharge should be subject to a charge and fines are appropriate for those causing damage to the Marine Park.

The financial loss which will occur because the sum of money raised by user pays charges is less than the total costs of managing the Marine Park should be borne by each of beneficiary groups but not the detriment groups. That is, funds should be raised from people currently using the Marine Park (gaining "use value" benefits), from those who are likely to use the Marine Park (gaining "option value benefits") and from the public at large, who may expect never to use the Marine Park but who like to know

that such a resource exists (gaining "existence value" benefits). There are in fact charges on some users (including permit applications assessment fees and the EMC), potential charges for potential costs in the form of performance bonds, and the public at large contributes through appropriations to the administering governments (Commonwealth and Queensland) from consolidated revenue.

Marine Park management should be efficient.

The second important principle in the debate on resource use asserts that *many environmental problems arise because assets are owned as common property (rather than private property) or because the rights of private ownership are confused or uncertain.* Common ownership, it is argued, leads to excessive exploitation and degradation of the resource, and the "tragedy of the [British] commons" is often quoted as a historic example of this process. Under common property ownership, there is no incentive to conserve or improve a resource since no user can exclude others from gaining the benefits, even though they do not contribute to the conservation or improvement. Thus, it is argued, common property title should be converted to private title. This process is called *closure*, after the enclosing of the rural commons in Britain throughout the 1700s. Enclosure does not necessarily involve allocating property ownership title to individuals. Permits, zoning, licences and the like can emulate private ownership. As an extension of this principle of private property, where some type of private title exists, its terms should be made clear and long lasting to prevent short term exploitation.

At a practical level, relying on user pays charges and enclosure of common property will not solve all problems associated with resource use. There will always be situations where these approaches are not practical and where benefits and costs remain excluded (called "externalities") from the process of decision making. Thus permits and management plans should have an important role in determining resource use. Further, there may be questions of equity of access or distribution of income which may require outcomes different from those produced by a regime of user pays charges and private property.

2.2.2 ABARE's recommendations

In 1991, ABARE published a report entitled *Charging Users of the Great Barrier Reef Marine Park* (ABARE 1991) and in it made recommendations based partly on principles discussed in section 2.2.1. It recommended:

The rights for tourism and mariculture operators to use particular sites should be clearly defined.

Private boat owners should be required to purchase use rights to designated areas and these charges should vary between areas to reflect the differing costs of monitoring their use.

Tourism operators and private boat owners should be subject to a common levy base for the purpose of management cost recovery - that is, the maximum likely number of visitor days per year spent in the Marine Park.

The Authority's accounting system should allow expenditures to be assigned to particular management activities and sites.

User group representatives should be consulted on the Authority's expenditures on management.

If "resource rents" (being profits calculated as the difference between revenue and all costs including the minimum return required to keep financial capital in the firm) are to be gained from tourism operators, then sites should be allocated to operators on the basis of competitive bidding for enclosed sites.

Current high demand reef sites should only be offered for tender in the long term, and only if current operators are told well in advance of the intention to do so. Resource rents, if collected, should be appropriated by Commonwealth consolidated revenue and used for Australia-wide purposes.

The report recommended a structure which would require substantial compliance costs for persons and industry, and administrative costs for the Authority, which seems to have been insufficiently appreciated by ABARE. The government decided instead to adopt a much simpler system than that suggested by ABARE, so that the two main charges are those for the processing of permit applications (introduced prior the ABARE report and the EMC) and the EMC. There has been no attempt to impose a charge on resource rents at this stage.

2.2.3 National Strategy for Ecologically Sustainable Development

The basic approach discussed in section 2.2.1 above is now incorporated in the National Strategy for Ecologically Sustainable Development (C of A 1992(a)). This is best illustrated by the discussion of pricing and taxation in relation to ecologically sustainable development (ESD), which describes the "challenge" as being:

To develop pricing and taxation arrangements which reflect social and environmental costs of resource use, while taking account of the equity and economic implications of proposed actions. (C of A 1992(a), p. 78)

2.2.4 RAC's recommendations

The Resource Assessment Commission's (RAC) inquiry into coastal zone management (RAC 1993) made many recommendations which are relevant to this review. The main ones, with their numbers shown as (R.xx), were:

Specific levies be used to help finance coastal zone management, provided that the measures are shown to be necessary for resource management purposes, that the revenue generated is set aside for these purposes, and that arrangements are fully transparent to the community. (R.47)

Government agencies should review existing charges with a view to recovering costs from users. (R.44)

Charges should be used to limit resource use where it has adverse environmental effects. (R.44)

Performance bonds should be extended to all new development excepting where equally effective enforcement measures exist. (R.46)

2.2.5 Views of the Tasmanian Department of Treasury and Finance

In a recent submission to the National Park Entry Fee System Review Panel, the Tasmanian Department of Treasury and Finance (1994) made specific comments and recommendations which were clearly based on the principles discussed above in sections 1.2 and 2.2.1. The main ones were:

The payment of an entry fee to a national park is a fee for service, namely use of the park. The fee should be set only in relation to a specific portion of the costs associated with the provision of the service, not in relation to the total costs of managing parks.

User fees as a means of recovering costs of providing services outside the government's core responsibilities are considered fair.

Parks provide private benefits to users and public benefits to the general community. Evidence shows that the general community places a high value on the preservation of areas for their wilderness, heritage, scenery, scientific and bio-diversity values and are willing to pay for it.

Users should only pay directly for the costs associated with their private benefits. These include the maintenance of camping grounds, roads within the park, buildings and operational facilities. The costs that result from public benefit include those of general administration and management, investment in infrastructure and general facilities. These should be borne by the public at large from consolidated revenue.

2.3 The Authority's charges

The Authority imposes two types of charges on users of the Marine Park. They are:

2.3.1 Permit Application Assessment Fee

Permits are required to conduct commercial activities in the Marine Park. Their purpose is to control environmental impacts and to separate conflicting activities.

The purpose of the Permit Application Assessment Fees (PAAFs) are to partly recover the costs incurred in assessing permit applications, and the revenue derived from these is shared by the Authority and QDEH. A guide to the PAAF charges is provided in Appendix B of this report. They vary, depending on the type of proposed activity, whether it requires the use of a facility or structure in the Marine Park, the carrying capacity of the aircraft or vessel to be used, and the amount of work required to assess the potential impacts. In general, the larger and more complex the activity, the larger are the costs of assessment and thus the larger is the PAAF. An "initial fee" is payable if the permit is for a new operation or if there is to be a significant change to an existing operation. A "continuation fee" is payable to gain a new permit at the end of an existing permit, when there is no significant change in the operation and when the application is lodged before the expiration of the former permit.

With the introduction of the EMC, changes were made to conditions of permits on which the EMC was payable. These included:

- the term of most tourism permits was increased from three to six years;

- permits are now transferable subject to approval by the Authority; and

- deeds of agreement are drawn up which ensure permittees know the nature and contents of their permits, that they carry public risk insurance, that they remove equipment at the expiry of the permit, and that they indemnify the Authority in relation to certain matters.

A permit may be suspended or revoked under the following conditions:

damage or threat of damage to the Marine Park which was not reasonably foreseeable when the permit was issued;

the permittee fails to comply with a permit condition; and

late or non-payment of the EMC (later than one calendar month after the end of each quarter for suspension, and 60 days after suspension for revocation).

2.3.2 *The Environmental Management Charge*

The details of the EMC are contained in Part VA of the *Great Barrier Reef Marine Park Act 1975* and Part 5A of the Act's regulations. They are summarised here in table 2.2.

Table 2.2 Main EMC charges

Nature of activity	Charge
Standard tourist operation: All tourist operations excluding beach hire, semi-submersible and glass bottomed boat use, installation and operation of tourist facilities, and some aircraft operations. They include day trips, extended charters, bareboats, sea kayaks, cruise ships and some aircraft operations.	\$1 per visitor per day or part of day, paid quarterly in arrears; free of charge visitors for the purpose of promoting the Marine Park or education are not included.
Transfer passenger operations: This is where people are transported into the Marine Park to disembark at a place contiguous to the Marine Park, are transported by the most direct reasonable route, and while transported do not engage in a tourism activity provided by the permit holder, or after disembarkation do not for 2 hours engage in any tourism activity provided by the permit holder.	nil.
Non motorised beach hire	Less than 6 pieces of equipment, \$48 p.a.; more than 6, \$100 p.a.
Dinghy hire	Less than 6 dinghies, \$200 p.a.; 6 or more, \$48 each p.a.
Motorised water sports	\$248 p.a. for motorised vessels; \$100 p.a. for jetskis.

Semi-submersibles and glass-bottomed boats	\$0.20 per passenger, excluding visitors who are part of an excursion conducted by the permit holder on which EMC is payable.
Flights for sight-seeing only	\$0.20 per passenger.
Pontoons	Where less than or equal to 40 square metres, \$45 per quarter; greater than 40 sq m, \$90 per quarter or \$1 per visitor per day, whichever is greater, excluding visitors who are part of an excursion conducted by the permit holder on which EMC is payable.
Floating hotels	\$140 per quarter or \$1 per visitor per night, whichever is greater.
Marinas	During construction, \$190 per quarter; during operation \$190 per quarter or \$1 per berthed vessel per night, whichever is greater.
Underwater observatories (not attached to pontoons)	\$65 per quarter or \$0.10 per visitor whichever is greater, excludes visitors on an excursion conducted by the permit holder on which EMC is payable.
Sewage discharge	Tertiary treatment, and secondary treatment <5% effluent, \$200 per quarter; secondary treatment >5% effluent, \$200 per quarter plus charge depending on discharge.
Commonwealth island resort: Lady Elliot Island	\$1 per visitor per day, excluding visitors who are on an excursion conducted by the permit holder on which EMC is payable.
Vessel based vendors primarily serving the tourism industry	\$60 per metre length of vessel.
Commercial vessels chartered for non-tourism purposes	\$1 per person undertaking the program per day.
Pearl and clam culture	\$1000 p.a. for the first 10 ha plus \$400 p.a. per 10 ha to a maximum of 60 ha.

Penalties in relation to the EMC are as follows:

Penalties with respect to log books and submitted data:

- (i) up to \$1,000 for not keeping up-to-date log books;
- (ii) up to \$4,000 for not supplying charging and data returns and other required information on time;
- (iii) up to \$8,000 for providing false or misleading information or false charging returns.

Interest is charged at the rate of 20% per annum for late payment.

An operator's permit may be suspended if the payment is not paid in full within one calendar month of the due date and the permit may be revoked if still unpaid at the end of 60 days of suspension.

Operators are reminded by the Authority that the EMC is a charge imposed on commercial operators and not on individual visitors, and that to advertise it as a charge on visitors could be considered misleading or deceptive, and therefore in breach of sections 52 and 53(e) of the *Trade Practices Act 1974*.

2.4 Structure of the EMC

Some observations can be made about the structure of the existing EMC charges:

2.4.1 Main purpose of the EMC

Although the charge is called the Environmental Management Charge, it is clear that the main purpose of the charge is to finance a particular aspect of Marine Park management, in the form of research, information and education.

2.4.2 Users of the Marine Park

During the development of the EMC concept, the target group of the charge varied. The term "users" was used extensively to mean the target group, and often included all those who benefited from recreation in the Marine Park, or those who profited from it, or those whose use damaged or threatened the Marine Park, or all of them. A charge on all simultaneously, however, possibly involves double charging and care must be made so as to avoid this. The three user groups can be defined:

- (a) *All primary beneficiaries of Marine Park management.* These users could also be called "consumers", and include visitors and recreational fishers. The EMC on standard operations, in so far as it is passed on to visitors in the form of increased prices or decreased services, can be justified on this basis. Equity requires that there be a similar charge on other beneficiaries such as private boat users. For the purpose of further discussion, an EMC targeting all primary beneficiaries or consumers will be called EMC(1).
- (b) *All people or organisations earning profits from operations in the Marine Park.* This group includes tourism operators, commercial fishers and mariculture operators. The optimal way to charge this group is by imposing a charge on their resource rents. It is not optimal to attempt to gain profits (resource rents) from tourism operators, for instance, by imposing a charge on the number of people using their services because these charges are so easily shifted to visitors in the forms of increased prices or reduced goods or services. Properly devised charges on resource rents cannot be shifted to consumers or suppliers of inputs.
- (c) *All people or organisations whose actions require direct monitoring or cause damage or may cause damage to the Marine Park or who cause crowding at sites.* This type of charge is of the strict "user pays" type. In this case the EMC would vary according to the impact of an action and would therefore depend on the conditions under which the action was taken. The EMC on standard operations is not of this type because the impact of visitors and operators varies so greatly between sites and conditions whereas this EMC charge does not. The EMC charges on sewage discharge is of this type, however. For the purpose of further discussion, an EMC targeting this group will be called EMC(2).

The list of EMC charges in table 2.2 above shows that the existing EMC charging structure includes charges of both the EMC(1) and EMC(2) type. The logic of EMC(1) may be used to justify existing charges on the standard tourist operation, non-motorised beach hire, dinghy hire, motorised water sports, semi-submersible and glass bottomed boats, sight-seeing flights, variable charges on pontoons, floating hotels, marinas and underwater observatories, and non-tourism charters. Charges on sewage discharge, and flat charges on pontoons, floating hotels and marinas (where they are believed to require monitoring or have an environmental impact or cause crowding costs) may be justified under EMC(2). If, however, there are no monitoring, environmental or crowding costs associated with these activities, they may be justified as a form of resource rent charge.

2.4.3 The role of permits, zoning and management plans

It is clear from the structure of charges, and revenue obtained from them, that the primary purpose of the EMC is to supplement the Authority's funding by imposing a charge on the beneficiaries of Marine Park management. The EMC's role in minimising monitoring costs or actual or potential environmental impact is minor and it is not used at all as a way of rationing scarce resources, in the form of particular sites in the Marine Park. Permits, zoning and management plans, combined with penalties for non-compliance and damage, are intended to be the main instruments performing these functions. Given the difficulty and costs of pricing all major areas and activities of the Marine Park as suggested by the strict user pays approach, the existing reliance on permits, zoning and management plans for these purposes is appropriate.

The use of an EMC which is composed of financing (EMC(1)) and user pays (EMC(2)) elements is justified provided the coverage is broad enough. The issue is whether all relevant beneficiaries are charged and all activities damaging or threatening the Marine Park are subject to the appropriate charge or permit or other management device. Clearly, at this stage, there is an argument for extending the EMC to cover private boat owners because they are beneficiaries of Marine Park management, because they cause management costs to be incurred and have adverse environmental impacts. There may also be a case for imposing a charge on ships using the Marine Park, in addition to the existing EMC, to recover monitoring costs.

2.4.4 Economic efficiency of the EMC

In terms of the principles of economic efficiency discussed in section 2.2 above, the EMC(1) component of the EMC structure imposes a price on an activity which may not directly lead to social costs being incurred, and is therefore inefficient because it equally discourages activities which cause no monitoring costs or environmental impact or crowding, and those which cause them. In the literature on economic efficiency, the value of this lost efficiency is called a "dead weight loss". Such an "inefficient" EMC may be justified as a "second best" solution, however, in this case if it is accepted that the Marine Park would be less than optimally managed without finance raised from this source. Given the reluctance of the government to increase contributions from general income sources for the purpose of Marine Park management, this is almost certainly so. It should be noted that the size of this dead-weight loss (as well as the difficulty of EMC administration) will increase if the real value of EMC charges increased.

2.4.5 Shifting of the EMC

The insistence that operators not describe the EMC as a charge on individual tourists is unnecessary and this statement is itself somewhat misleading as to the impact of the EMC. It is true that the operator pays the Authority, but whether the operator or visitor ultimately pays the EMC depends (as it does with all such charges) on the market conditions faced by the operator. In the survey of operators undertaken for this review (see table 3.1) it was found that of those who returned the survey form, 25.8% said that they passed part or all of the EMC on to visitors in the form of increased prices (62.9% absorbed it, possibly by decreased services and 11.4% did not answer the question). The proportion admitting to passing it on may be biased downwards because of the Authority's warning that the EMC is not to be described as a charge on visitors. In the longer term the actual percentage passing it on is likely to increase as the operators' pricing policies adapt to changed circumstances, especially for those who advertise overseas or via brochures and have to fix their prices for up to two years. Clearly, the ability of those who did absorb the EMC through reduced profits to continue to do so will decrease with any increase in the real value of EMC charges.

Further to this point, the operator can only be expected to respond to the EMC in the way it does to any other cost of production. A comparable example is the cost of fuel for a transport company. It is paid in the first instance by the supplier. Increases in the price of fuel, however, are either passed on to consumers (in the form of increased prices or decreased quality or quantity of service), or not, depending on the market conditions which the supplier faces. Overall, however, fuel price increases are passed on to the consumer. Similarly, the EMC should be seen as ultimately impacting on visitors. Such an approach recognises the economic reality.

Failure to recognise that the EMC impacts on visitors in this way creates three specific problems:

- (a) If the EMC is interpreted as a charge on operators because they earn profits from the resources of the Marine Park then there is no justification for a charge on recreational users, because they do not earn profits. Indeed to charge them would be inequitable because this would result in local recreational users being charged while visitors (possibly from overseas) undertaking the same activities through an operator would not be charged. This may be interpreted as a subsidy paid by local residents to foreign tourists.
- (b) If it is assumed that the impact of the EMC is not shifted to visitors, so that it is a profits charge, then it is inequitable because the EMC payments by operators vary with the number of visitors and not with profits. There are, for example, small operators (with low EMC payments) earning high rates of return and large operators (with large EMC payments) making losses.
- (c) "Double dipping" now occurs. An example is the case where one permit holder who provides a cruise drops visitors off at a pontoon where another permit holder provides another chargeable activity. Because the EMC is imposed on permit holders and the visitors in this example use the services of two permit holders, two EMC payments must be made (or "the visitor is charged twice" as operators say). This is inequitable if those charges are in fact passed on to the visitor. At present, operators

can overcome this if they agree to consolidate their activities under one permit holder. A great deal of trust is required for this to take place and operators are reluctant to do this. Double dipping need not legally occur if the EMC is acknowledged as impacting on visitors because the number of visitors to be used when calculating the EMC payable by an operator would "exclude visitors who are part of an excursion conducted by *any* permit holder on which the EMC is payable", or words to that effect. It would be then the responsibility of the operators to ensure that double dipping does not occur.

It must be emphasised that the above discussion is concerned with the interpretation of the impact of the EMC, and not with the party who is legally responsible for paying the EMC. This should remain the operator, as is the case now, and as it is with similar cases where government charges exist.

2.5 Transfer passengers

Transfer passengers (defined in table 2.2) are not included by operators when calculating the EMC payable, except where they are being delivered to islands owned by the Commonwealth. Since Commonwealth owned islands are included within the Marine Park, activities on them are considered to be taking place within the Marine Park and thus attract the full EMC, paid for by the permittee providing the transport.

The EMC is not payable on the transfer of passengers to other islands within the Marine Park that are wholly or partly owned by the Queensland Government, or to privately owned resorts on islands. In so far as visitors to these islands enjoy benefits from the Marine Park, by swimming, site-seeing or other activities which are not chargeable, it can be argued that the transfer operators and transfer passengers are not adequately contributing to costs of management of the Marine Park.

Vessels that carry transfer passengers present a similar potential threat to the Marine Park (for example, the effects of bow waves on beaches, collision with marine wildlife and reefs,

and oil/fuel pollution in the event of mishaps involving vessels) as other operators in the Marine Park who pay the EMC. While it is possible to argue these vessels should be exempt from EMC(1) for transfer passengers because these passengers are often incidental beneficiaries of the Marine Park, there is a case for operators of these vessels to pay a charge for the potential and real adverse environmental impact on the Marine Park. That is, an EMC(2) type payment could be levied. If such a charge was to be imposed it should reflect the real or potential environmental impact and could be based on vessel size, the total distance travelled and the routes followed.

In principle, an EMC(2) could be extended to all vessels using the Marine Park, including aircraft. Such a charge would be consistent with principles stated later in section 3.2 of this report.

2.6 Equity of the EMC

Two general questions of equity arise in relation to the existing structure of the EMC. They are:

Should all operators pay the same rates of EMC, regardless of any shifting of the burden which takes place, and be subject to the same reporting requirements, even though their financial positions differ? In particular, should "small operators" and "large operators" pay the same EMC rates and have to keep the same records?

When considering individuals in society generally, it is common to discriminate in favour of the relatively poor. It is not, however, usual to treat business in this way and it should not apply to the EMC. That is, the existing EMC charges and reporting requirements should not be less, simply because a business is small. If recognition of the difference in profits between operators is desired in the Authority's charges, then it

should be through charges based on resource rents, because these cannot be passed on to visitors.

Is the EMC levied on all people or organisations who undertake an activity of the type on which the EMC is levied? That is, is the EMC charging base broad enough?

Clearly, if it is accepted that the EMC(1) component of the charge ultimately impacts on visitors then equity requires that similar charges be imposed on other primary beneficiaries of the Authority's management of the Marine Park. Most obvious among those not currently charged are private boat users.

The EMC(2) component of the EMC structure relates to direct management costs and environmental impact, although the permit system, zoning and management plans are the principal management instruments in the case of environmental impact. Again, the equity issue is whether all actions by all people and organisations are satisfactorily treated by the combination of EMC(2), permits, zoning and management plans. There are many areas where legal, administrative and political factors prevent the Authority extending its control. However, shipping is an area which requires the Authority's management and there may be a case for an EMC(2) charge to recover those management costs.

2.7 Resource rents

In the context of the term "resource rent", the word "rent" is misleading. It has nothing especially to do with land, islands, sea, etc. Resource rent is a measure of profit. It differs from the usual accounting or taxation definition because it is calculated as the difference between revenue and all costs, including *the return which could have been gained if the capital had been invested elsewhere* (known as the "opportunity cost of capital"). Resource rent is, therefore, a pure surplus of revenue over *all* costs.

The Government (through the Authority or otherwise) has not taken up the possibility suggested by ABARE (1991) of introducing charging devices for the explicit purpose of capturing resource rents from operators. Such devices could be justified if it is argued that all beneficiaries of Marine Park management should be charged, including profit earners. Charges on resource rents are an optimal method of capturing profits because, unlike other types of charges, these cannot be passed on to consumers or to suppliers. (For a discussion of the use of resource rent charges in the mining industry see Industry Commission 1991, pp. 365-377.)

Government charges, other than those which are shifted to consumers, involve the payment of some economic rent to the Government. Since it is likely that not all of the EMC and PAAF payments are passed on to visitors, the Authority is likely to capture some of the operators' economic rent through these charges. However, the level of rents captured is likely to be small and there is the possibility of increasing it through the use of other financial devices.

The introduction of a charging device which captures rents completely, however, such as ABARE's suggestion of competitive bidding for permits, would leave operators with no real profits, and result in their operations being marginal in the long term.

There are precedents from Australian Governments for the capturing of all or only part of the economic rents from the use of a resource. Some states have a resource rent tax on mining, for instance, which captures part of the resource rent. In some other cases, however, governments use secret tendering to allocate resources or contracts and this process extracts most or all of the rent.

The Authority operates a well established system of permits which are now granted for extended periods and which are transferable. Before these permits can be used as a basis for imposing charges on resource rents, however, the criteria for their allocation would need to be changed so that they confer a high degree of exclusivity in access to popular sites. Further, the Authority intends to use zoning and management plans in the future as an

alternative to permits for many areas, so that resource rent charges based on permits would have to be restricted to the most popular sites for which permits would still apply.