
ENVIRONMENTAL LAW ENFORCEMENT: THE ROLE OF THE JUDICIARY

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SUMMARY

Under the modern scheme for environmental management, courts assume a subsidiary role in enforcement to administrative agencies. But, a number of new and innovative techniques are available to bolster the role of the courts in environmental protection including tort, administrative and criminal law along with conflict of law. In addition, courts play a role in determining the adequacy of quantification of environmental damage. The article concludes with a discussion of empirical applications including discussion of four cases.

1 INTRODUCTION

Commentary upon how judges view their role in deciding environmental cases presents acute problems for the young academic. There is the obvious caution to prudence against presenting a diagnosis of the judicial mind to an audience with real judges in attendance. More crucially, perhaps, there arises the need for to clarify the sense in which such an exposition could possibly be meaningful.

The judiciary is, of course, the guardian of the rule of law. Courts routinely exercise their constitutional prerogative to interpret and enforce all of the laws of the land. The role of the judiciary is to enforce the law. That is what courts do. In this sense, therefore, there can be no special role for the judiciary in ensuring enforcement and compliance with the law in environmental cases.

2 COMPARISON WITH ADMINISTRATIVE BODIES

A more teleological perspective could allow comment upon the role of the

courts vis-à-vis that of other agencies, in ensuring environmental law enforcement and compliance. At first blush, this appears a more fruitful approach because the legislature is increasing allocating primary responsibility for environmental regulation to administrative agencies. In the Caribbean, for example, the modern era of environmental law began with the passage of the framework-type, National Conservation and Environmental Protection Act 1987, of St. Christopher and Nevis. This was followed in rapid succession by the Natural Resources Conservation Act 1991 of Jamaica, the Environmental Protection Act 1992 of Belize, the Environmental Management Act 1995 of Trinidad and Tobago, (as replaced by the Environmental Management Act 2000) and the Environmental Protection Act 1996 of Guyana.

An essential purpose of this legislation was to overcome the traditional fragmentation in environmental regulation by institutionalizing broad-based environmental management. The basic function of the new administrative body is, in the words of one statute, 'to take such steps as are nec-

essary for the effective management of the natural environment so as to ensure the conservation, protection, and sustainable use of its natural resources'. Discharge of this obligation requires the setting of rules on what can and cannot be done and the establishing of a coherent system of control in which the regulating body sets a framework for activities on an ongoing basis, with a view to conditioning and policing behavior. Typically, regulatory tools include permits, licenses, notices, and cessation orders.

Under the modern scheme for environmental management, then, the courts assume a subsidiary role in enforcement. Administrative bodies do still have recourse to use of the criminal law, but only as a last resort. The criminal law is, after all, a prime example of remedial control, with its emphasis on punishing the abuser of the environment. Administrative regulation aims to be preventive by, for example, stopping pollution before it occurs. Individuals do still petition the courts for review of the action of administrative bodies, but only when the advantages of the informality and the relative lack expense of addressing concerns to the environmental tribunals do not produce minimum satisfaction.

The complementary role of the courts has been recognized, perhaps welcomed, by the courts themselves. In the Canadian case of *R. v. Consolidated Mayburn Mines Ltd.* the court made clear that like court orders, administrative orders deserve to be respected and obeyed. It made the point that administrative bodies regulate countless activities in society; regulation that was essential for the protection of individuals and groups in the society and for the prevention of harm to societal interests. The orders and decisions issued by administrative bodies thus form an important part of the law. Unless these orders and decisions are respected the orderly functioning of regulatory justice would suf-

fer. This meant that fidelity to the internal mechanisms and forums established by the legislature to enable the individual to assert their rights. As the Court went on to say:

"It is clear from a review of the Environmental Protection Act that its purpose is not simply to repair damage to the environment resulting from human activity, ... but primarily to prevent contamination of the ... environment. Such a purpose requires rapid and effective means in order to ensure that any necessary action is taken promptly... In the case at bar, the appellants elected to disregard not only the order, but also the appeal mechanism, preferring to wait until charges had been laid before asserting their position. ... to permit the appellants to collaterally attack the order at the stage of penal proceedings would encourage conduct contrary to the Act's objectives and would tend to undermine its effectiveness."

The House of Lords made statements to similar effect in *R. v. Wicks* in the context of dismissing a collateral challenge to a planning decision.

3 JUDICIAL PERSPECTIVE IN ENVIRONMENTAL LAW ENFORCEMENT

In the end, however, not even the judicial concession of exercising a subsidiary and complementary role to that of administrative agencies resolves our initial dilemma. If the court is consigned the status of the forum of last resort, its generic role in, for example, the interpretation of the criminal law or administrative law, does not change merely because the case before it relates to the environment.

At the same time, it would be difficult to argue, with a straight face, that the judicial process is an exercise in syllogistic reasoning where the clearly established statutes or precedents are applied to the facts with little or no discretion on the part

of judges. Even without being a fully subscribed member of the Realism School of American Jurisprudence, it is clear that where there are numerous precedents, many conflicting with each other, there is no automatic wrong or right answer to a legal dispute. There are simply a variety of answers from which the judge has to choose one. In addition to the numerous precedents, there are also numerous techniques for interpreting those precedents and indeed, statutory enactments. It may therefore be unrealistic to expect judges to be machine-like and totally neutral. The good faith exercise of best judgment, as assisted by counsel, is all that can reasonably be asked or expected of the judiciary.

It is in this sense, then, i.e., within the margin of discretion that the way in which judicial decision-making has been exercised that environmental organizations and environmentalists have sometimes expressed concern with the judiciary's role in ensuring environmental enforcement and compliance. A perception exists, whether real or imagined, that many of our judges place a higher value on economic development than environmental protection and that this influences their selection of the final decision from the variety of possibilities that exist. This perception has been strengthened by several environmental law decisions. The anecdotal reports of the undisguised anger of a Trinidad and Tobago Magistrate when asked to try a man for contravention of the Wild Birds Protection Act whose only crime was, in the words of the Magistrate, 'trying to feed his family.' The fact that the first three attempts by Caribbean nationals to have the courts review official decisions that, allegedly, caused unlawful harm to the environment, were dismissed on the ground that the applicants lacked standing. The fact that the first judicial comment upon the workings of an administrative body established under the modern umbrella-type legislation was widely cited in the Jamaican Press as

evidence of the Court's preference for commerce over the environment.

Lest any Caribbean judge in attendance here should be tempted towards a citation for contempt, the present writer hastens to add that the perception of lack of judicial zeal towards environmental protection is not confined to the Caribbean judiciary. At the international level, persistent criticism on this score led to the establishment of an Environmental Chamber to the International Court of Justice, staffed by judges with particular expertise or interest in the field. It is therefore somewhat ironic that the first ruling of the Chamber in the Gabcikovo-Nygamaros Project case (Slovakia and Hungary), between was widely decried by the same critics as hugely disappointing for being anti-environment. In commenting upon the role of American Courts in the Search of Environmental Quality, Professor Joseph Sax of the University of Michigan Law School, wrote in 1970 that:

- Anyone who enters a courtroom with a conservation case can first expect resistance from the court itself. The Judge's principal thoughts are almost sure to be, "Why did you come to me? Why don't you take your troubles to the legislature? What do I know about all this? This is not a matter for judicial consideration. What reasons can you possibly give for suggesting that I – a judge – should substitute my judgment for the expertise of an agency whose business it is to make the kinds of decisions you are challenging? Aren't you asking me to serve as a super-planning agency? And, in any event, what law was broken by the defendants?
- I am not here to enforce the good, the true, and the beautiful, to be the fount of ultimate wisdom and social conscience. I am here to enforce the law. What rule is violated by this highway plan, this dam project, or this proposal to spray elm trees with DDT?

- Finally, the judge will ask, "What damage do you charge has been done to you? Where is the broken arm or the broken contract? I am not a prophet who can speculate upon the ultimate fate of gulls and terns. I redress loss; I do not paint the future rosy.'

Much has changed in the intervening three decades since 1970, particularly as we have noticed, on the legislative front, but the impression of a tradition of judicial insensitivity to environmental concerns persists. At the same time, there has, even in the view of the most extreme of environmentalists, been a gradual movement, even if not always in a straight line, towards placing greater premium upon environmental security.

In looking at the changing attitude brought to the weighing process used to make final decisions on environmental law enforcement, it is convenient to consider the branch of law used to enforce the environmental standards in question. Thus, the environmental protection regime is enforced through the law of tort, through the operation of administrative law and through the criminal law.

4 TORT LAW: FROM COMMON LAW PRINCIPLES TO ENVIRONMENTAL ACTIONS

The law of tort, such as nuisance law and *Rylands v. Fletcher*, are essentially aimed at protecting individual rights or rights relating to property. The protection offered to landowners against unreasonable injury to their land by the action of another has obvious environmental implications, but was not designed to promote environmental preservation as we understand that notion today.

4.1 Using The Common Law As A Mechanism For Environmental Protection

An important debate, which is ongoing, concerns whether these judge-made rules ought to be developed so that they are directly concerned to secure environmental protection.

Many of the judges who have considered this issue have clearly been reluctant to develop tort law in this way. This reluctance was exemplified in *Boomer v. Atlantic Cement Co.*, decided in 1970 by the Court of Appeals of New York. The Court expressly refused to allow private litigation in nuisance to be used as a tool to effect broad control of air pollution. A case in water pollution provided the opportunity for the House of Lords to make similar indications. In *Cambridge Water Co. Ltd., v. Eastern Counties Leather plc* the House refused to reform the tort of *Rylands v. Fletcher* into a more specific common law rule about the control of hazardous substances. Lord Goff rationalized this approach on the ground that :

- '... as a general rule, it is more appropriate for strict liability in respect of operations of high risk to be imposed by Parliament, than by the courts. If such liability is imposed by statute, the relevant activities can be identified, and those concerned can know where they stand. Furthermore, statute can where appropriate lay down precise criteria establishing the incidence and scope of such liability.'

4.2 Standing To Bring Environmental Suits

A similar reluctance is evident in the related question of standing to bring common law actions to vindicate environmental rights. The requirement in most common law actions, to demonstrate some sort of proprietary interest or show special damage, remains a judicially self-imposed obstacle to environmental actions. After some indications of willingness by the English Court of Appeal to relax the

requirement, the fundamental cautiousness returned in the House of Lords decision in *Hunter v. Canary Wharf*. The House returned the law of private nuisance to its original position of protecting only property rights holders. In the words of Lord Hoffman :

- "... the development of the common law should be rational and coherent. It should not distort its principles and create anomalies as an expedient to fill a gap."

The basic point, of course, is that any loosening of the strict requirement for standing is within the margin of judicial discretion. Reconfiguration of the way in which that discretion is exercised may be profitably undertaken, for instance, in relation to private suits for public nuisances. The well-known rule, derived from *Boyce v. Paddington Borough Council* is that an individual can only bring suit without the fiat of the Attorney General in two circumstances. First where the interference with the public right is such that some private right of that person is at the same time interfered with. Secondly, where no private right is interfered with, but the person, in respect of his public right, suffers special damage peculiar to himself from the interference with the public right.

This requirement to show special damage was interpreted in an interesting way in *Chandat v. Reynolds Guyana Mines Ltd.* where farmers claimed remedies in respect of damage to their crops caused by polluting emissions from the defendant's bauxite works. The court found that the pollution constituted a public nuisance because it affected a large number of persons and was widespread in its range and indiscriminate in its effects. However, these characteristics warranted action by the community at large rather than individuals, none of whom could claim to have suffered any damage, loss, or inconvenience greater in quality than the others. Happily, the more recent decision in *Broderick v.*

Alcoa Minerals of Jamaica appears to have allowed a representative action in nuisance in respect of polluting emissions from a bauxite plant.

Admittedly, however, nothing in the tenure of the judgments in *Broderick* supports the hope that standing would have been allowed to individuals whose roof had not been corroded by the sulphates from the plant but who simply wished to halt the polluting emissions in order to protect the atmosphere.

4.3 Conflict Between Private And Public Law

Another context in which the exercise of judicial discretion has import for the environment is in the circumstance where there is a conflict between private law and public regulation, in the sense that an activity is lawful under one regime but not the other.

Private law rights can clash with many regulatory controls, as for example, in the case of the award of waste management licenses. *Budden and Albery-Speyer v. BP Oil* involved a claim in negligence for alleged injury to children by ingestion of petrol fumes. The claim was defended by the two oil companies sued on the basis that they had complied with the regulations prescribing the lead content in petrol. This defense was upheld since to decide for the children would be to replace the permissible standard established by Parliament, in favor of a lower, judicially determined standard, by way of litigation under the adversary procedure.

Selection of this consideration for deciding this case on atmospheric pollution may be compared with decisions on water pollution. With regard to pollution of water-courses, it has always been accepted that the grant of a license to discharge polluting matter, in no way alters the common law rights of a riparian owner to sue the discharger.

Similarly, the grant of planning permission may authorize activities that give rise to claims in nuisance. In granting a planning application it must be assumed that the planning authority has balanced the impact of the development upon private interests (e.g. neighbors) with any competing public interests and concluded that the public interests in allowing the development to proceed should prevail.

After some hesitation, the courts appear to have decided, properly, it is submitted, that planning approval does not foreclose upon the separate question of the right to proceed in nuisance law. The controversial ruling of Buckley J. in *Gillingham Borough Council v. Medway (Chatham) Dock Co. Ltd* raised concerns that any activities engaged in under a planning permission could not lead to liability in nuisance. More recent decisions, however, seem to have narrowed the effect of the judgment considerably. In *Wheeler v. JJ Saunders Ltd* the view was taken that planning permission does not act as a defense to a claim in nuisance; rather Buckley J's decision went to the heart of the definition of a nuisance, and the locality doctrine in particular. The question was whether the development pursuant to the grant of planning permission had so changed the nature of the area that what would have been a nuisance before the development could not be considered so now.

5 ADMINISTRATIVE LAW: JUDICIAL REVIEW OF ENVIRONMENTAL REGULATION

The heavy reliance placed on 'framework' legislation, fleshed out by guidance, regulations and decisions of the enforcing authorities means that many of the everyday rules of environmental protection are made without the scrutiny of parliament. Similarly, statutory requirements, such as that the environmental agencies

consult with other authorities or the public, publish documents, require the environmental impact assessments, are not supervised by the legislature. Scrutiny of administrative regulation must therefore be undertaken by the courts, which ensure, through the mechanism of judicial review, that the authorities perform their duties properly.

Recent developments in the law support the thesis that the way in which judicial discretion is exercised to interpret legal standards is directly proportional to the usefulness of judicial review as a mechanism for environmental protection. A particularly vexing issue concerns the judicial interpretation of the standard applicable to the question of standing to seek judicial review.

5.1 The Standing Requirement

In order to have standing to bring an action for review, the applicant must demonstrate that he or she possesses a "sufficient interest" in the matter to which the application relates. Until recently the courts over the common law world all adopted a restrictive interpretation to the standing requirement. They ruled in a number of cases that environmental pressure groups or public-spirited individuals did not satisfy the *Boyce v. Paddington Borough Council* test so as to obtain review. For example, in *R. v. Secretary of State for the Environment ex p. Rose Theatre Trust*, an interest group specifically formed to defend the remains of an Elizabethan theatre, was refused standing. It was held that, as individuals, none of the group had any special interest in the matter over and beyond the general interest of the public. The case resulted in a great deal of criticism and was a blow to the notion of environmental litigation in the public interest. Among other things, *Rose Theatre Trust* appeared unconcerned, or at least not overwhelmed by the probability that no one could sue in

such a situation thereby leaving the decision of the Government agency beyond possibility of rebuke.

5.2 Caribbean Trilogy

A similar criticism may be leveled against the first three Caribbean attempts to seek judicial review of environmental decision-making. The trilogy began in March 1993 with *Spencer v. Canzone Del Mare and the Attorney General of Antigua and Barbuda* (Spencer No. 1). The applicant was a Member of Parliament of Antigua and Barbuda and Leader of the Opposition. He alleged that the Acting Chief Town Planner, acting on behalf of the Land Development Control Authority, had ordered the defendants to halt all development activities at its Coconut Hall site because the work there was environmentally unfriendly and required an environmental impact assessment, which had not been done. It was further alleged that the Prime Minister had improperly written to the developer allowing the continuation of construction. The application for declaratory orders and an injunction was dismissed on the ground that the plaintiff lacked standing because he had not shown 'sufficient interest' in the matter to be litigated.

In June and August 1996, the High Court of Barbados considered the standing issue in *Scotland District Association Inc. v. Attorney General et al.* The applicant was a recently formed corporation whose objective was to foster and promote the preservation and improvement of the ecologically sensitive Scotland District. Its application for a declaration that the decision of government to site a sanitary landfill for the deposit of waste materials and refuse in the Scotland District was unlawful was rejected. Although there was not much discussion of the locus standi point, the Court appears to have agreed with the defendants' argument that members of the association had no individual interest in the mat-

ter and that joining themselves into a company created no better right than they enjoyed as individuals.

Finally, *Spencer v. Attorney-General of Antigua and Barbuda et al* (Spencer No. 2), decided in April 1998, rejected an application from Mr. Spencer for a declaration that the agreement between the Government and a private developer for a tourist development on Guiana Island was unconstitutional. One ground advanced by applicant was that the proposed development was harmful to the ecology and was contrary to common law principles that protect the environment. At first instance, Saunders, J. found that the applicant had standing but rejected his arguments on the merits. This decision on standing was overturned on appeal. In the view of the Appellate Court, the applicant had failed the constitutional requirement that he should have "a relevant interest" in order to be granted standing.

Admittedly, there are important differences between applications by genuine environmental organizations or pressure groups to seek judicial review and applications by professional politicians who may have other axes to grind. The Court clearly has an interest in not becoming a forum for political debate, particularly in circumstances where the applicant has access to Parliament.

However, the broader problem concerns interpretation of the 'sufficient interest' criterion. Parliament was not a possible venue to the applicants in the Scotland District case but they were nonetheless deemed not to have sufficient interest. This was despite the fact that Barbados has special legislation in the form of the Administration of Justice Act 1980, which specifically allows for litigation in the public interest. Indeed, even more recent decisions have continued the now ingrained tradition of a restrictive approach to standing, requiring, virtually, that the

applicants possess a property interest in the subject matter of the litigation as a condition precedent for standing. On the other hand, the Cayman Islands courts have very recently pronounced upon the standing requirement in the context of planning legislation in a way that should give hope to the green constituency.

5.3 Should the Boyce Test Apply?

Whether the *Boyce v. Paddington Borough Council* test, developed in the context of a private action for public nuisance, is appropriate to determine standing for judicial review of environmental decision-making, seems debatable. It appears entirely reasonable that in nuisance, where the plaintiff is attempting to recover compensation or to halt damage to an interest in land, that special loss should be the measure of compensation and of whether an injunction is appropriate. But in situations where the applicant sues to ensure sound environmental management, the paramount concern is the vindication of the public interest. This is reflected in the fact that the remedy sought tends to be one of the prerogative remedies rather than an award of damages. From this it would seem to follow that the criterion of standing based on special loss and injury might not necessarily be appropriate to review actions.

The latter considerations appear to have led to the relaxation of the standing requirement in some non-Caribbean jurisdictions, notably, United Kingdom (*R. v. Pollution Inspectorate, ex p. Greenpeace* (No. 2), ; *R. v. Secretary of State for Foreign Affairs, ex p World Development Movement.*) and the United States (*Sierra Club v. Morton*; *United States v. Students Challenging Regulatory Agency Procedures* (SCRAP)).

5.4 Relationship Between Judicial Review And Environmental Management

It is not being contended that judicial review will necessarily ensure sound environmental management and consequent elimination of risks to environmental security. Even if the recent more liberal approach to standing was adopted in the Caribbean, there would still remain clear limitations to what judicial review could achieve. As Thorton and Beckwith state, in judicial review actions, the role of the court is confined to ensuring that public authorities perform their functions properly. The court cannot substitute its own views on the merits of a decision for the views of a public authority.

The institutional constraints on the court means that it cannot hope to have access to the same information. The importance of the recent trend in liberalizing the standing requirement is that the courts themselves are enabled to perform their role of keeping administrative bodies within the limits of the powers assigned. Easier access also comports with international admonitions, found in Principle 10 of the 1992 Rio Declaration, that governments should provide 'effective access to judicial proceedings' for litigation of environmental issues.

6 THE CRIMINAL LAW

Far from being the epitome of 'black-letter law, the criminal law provides many opportunities for the exercise of judicial discretion in ensuring minimum conditions of environmental integrity.

6.1 Establishing Violation

For example, the exercise of discretionary judgment may be critical in relation to determination of violations. The weight that a judge places on environmental protection influences that judge's decision of such issues as interpretation of criminal statutes, the need to prove mens rea, as was so startlingly demonstrated in

Federal Steam Navigation Co. Ltd. v. Department of Trade and Industry ('or' meant 'and').

Determination of whether a defense has been made out could also involve direct judicial decision on the weight to be placed upon environmental preservation. Under the Clean Air Act 1964 of Jamaica, for example, it is a defense to prove the use of 'best practicable means' to prevent emissions from industrial works. 'Best practicable means' is expressly defined to require consideration of local conditions and circumstances, financial implications, and the current state of technical knowledge. The ultimate decision, then, will involve arbitration of the appropriate balance to be struck between economic and environmental factors. The judge is thereby legislatively drawn into deciding upon the economy vs. environment debate.

6.2 Penalties

Another obvious example of wiggle room for the exercise of judicial discretion arises in relation to the determination of appropriate penalties, given that there are no mandatory sentences for environmental offences. A recurrent criticism of Caribbean environmental law has been that the penalties for infractions are not severe enough to serve any deterrent effect. When fines were legislated in the early environmental statutes, no consideration appears to have been given to factors such as cost recovery, market value, or environmental rehabilitation. Nor were mechanisms included for upward revision in the context of increased scientific appreciation of environmental harm or (more dramatically in some countries) fluctuations in currency valuations.

These are matters that a judge can do little about. But there has been the further observation that first offences normally attract the most minimal fine possible, and although available under most environmental legislation, imposition of a custodial sen-

tence is virtually unheard of. A recent Magisterial decision in Barbados made headline news as the first time that anyone had been convicted for illegal dumping. The sentence was a reprimand and discharge.

In accordance with increasing trend of placing greater judicial weight upon environmental protection, sentencing policy might benefit from review.

6.2.1 Fines

Where relevant evidence is available, from the administrative body or elsewhere, the size of the fine might be linked to the extent of environmental harm. Already, recent statutes have markedly increased the maximum fines that may be imposed; under the Coastal Zone Management Act 1998 of Barbados, the equivalent of US\$200,000 might be inflicted.

6.2.2 Imprisonment

Traditionally, imprisonment was not imposed for environmental offences because such offences were thought not to be crimes in the strict sense of the word. Environmental offences were considered morally ambiguous because the activity causing the offence was often undertaken pursuant to socially productive activities that employ persons and contributed to the national economy. The social utility of the activity made courts reluctant to impose sentences of imprisonment.

This attitude remains and imprisonment is, rightly - many commentators would agree - reserved for the most egregious of environmental offences or where the accused acted willfully in contempt of court. So, in *The Barbuda Council v. The Attorney-General (Antigua & Barbuda) et al*, the court imposed a sentence of imprisonment on a Minister of Government who had authorized mining of sand in defiance of injunction imposed by the Court. The Minister escaped having to do the jail time

compliments of a pardon by the Governor General at the instance of the Prime Minister.

6.2.3 Alternative Sentences

Increasingly, modern environmental legislation gives courts alternative sentencing options. In addition to fines and/or sentence of imprisonment, the court is expressly empowered under the Environmental Protection Act 1992 of Belize Act, for instance:

β To direct the offender to publish the facts relating to the conviction.

β To direct the offender to perform community service.

These kinds of sentencing alternatives have been used to good effect in other jurisdictions. For example, in Canada, environmental offenders have been ordered to issue verbal apologies, publish newspaper apologies, write books and dissertations relating to their bad environmental conduct, and (most importantly for my students) fund environmental scholarships. My students have consistently argued the point that that it is not apparent that these sentencing options could not be utilized even without express statutory authorization.

7 ADEQUACY OF QUANTIFICATION OF ENVIRONMENTAL DAMAGES

7.1 Introduction

For many decades the issue of adequate quantification of environmental damages was largely ignored in Caribbean jurisprudence. As late as 1983 the United Nations Environment Programme (UNEP) Study of Caribbean environmental practices noted that the interconnectivity of ecological assets were not always appreciated in economic calculations. UNEP gave the following example of an island endowed with extensive mangrove swamps and which, as a consequence has a shrimp fishery:

"Unaware that the shrimp fisheries depends

on the existence of healthy mangroves, the islanders take a decision to destroy them in order to construct harbors, marinas, tourist resorts, or even to harvest the mangrove forest for fuel as has been proposed in some countries. The consequence may well be a ruined shrimp industry."

In November 1989 the Caribbean Conservation Association organized a Caribbean Conference on Ecology and Economics in Barbados. The Conference viewed the absence of environmental resources from economic calculations as a case of market failure. It endorsed the need for action at the policy-making level. It was agreed that the state should take steps to reflect environmental costs and benefits in its macro- and micro-economic interventions.

7.2 Jurisprudence of Ecological Valuation

7.2.1 Criminal Sanctions

Caribbean environmental regulation relies overwhelmingly on "command and control" strategies, and primarily the use of criminal sanctions. Statutorily prescribed deterrents are normally of a financial nature but these financial penalties are not generally quantified so as to reflect the actual loss to the environment. Most statutes merely stated the fines to be paid for offences without attempting to place a precise value on harm inflicted on the environment or the cost of environmental rehabilitation.

a. Levels of Fines

A recurrent criticism of Caribbean environmental law has been that the levels of fines that may be imposed for environmental infractions are much too low to serve any deterrent effect. When the early environmental statutes were drafted no serious consideration was given to factors such as cost recovery, market value, environmental rehabilitation. Nor were mechanisms included for upward revision in the context of inflation, fluctuations in currency

valuations or increased scientific appreciation of environmental harm; circumstances that have attended Guyana, Jamaica, and Trinidad and Tobago, among other jurisdictions. Additionally, first offences normally attract the minimum fine possible. These deficiencies continue to afflict modern management frameworks and there continues to be significant differences in the quantum of fines for the same environmental offences as among the different island states. Failure to impose penalties reflective of environmental damage has had negative implications for the rule of law with the emergence of "continuous offences" whereby fines imposed following successful prosecutions have been paid but the offence continues unabated. Environmental agencies are forced to resume the lengthy, expensive, and scientifically and psychologically challenging process of prosecution whilst environmental damage is prolonged in the interim, often to an irreparable degree.

b. Linking Fines To Environmental Damage

The most recent legislative response to the conundrum of sanctions for environmental offences has been significant upward revisions of the levels of fines. Prosecutors may offer recommendations with regard to appropriate financial penalties and it has been canvassed that such recommendations be based upon the nature and extent of injury caused to the environment. In specific instances legislation itself has sought to link the quantum of financial penalty to the magnitude of environmental harm, albeit in the crudest of terms. In order to further reduce the economic incentive of using the environment as a free good criminal Courts are increasingly empowered to hold the offender liable to the Crown for the value of "property removed or of damage done" to flora and fauna. This is additional to any other penalty for which the offender is liable. The valu-

ation by the Court is legislated in terms of the "full market value" of the environmental damage. An alternative formulation empowers the Court to impose "additional fines" to reflect any monetary benefits accruing to the offender in consequence of the commission of the offence. Such fines are in addition to "the maximum amount of any fine that may otherwise be imposed". Yet another formula allows fine of "three times the assessed value of the damage caused."

7.2.2 Civil Liability

a. Common Law Actions

Nuisance is the common law tort most applicable to environmental harm but the torts of negligence, trespass, and Rylands v. Fletcher may also be applicable. Caribbean courts adhere to and faithfully apply common law principles that guarantee a plaintiff "full" redress from the defendant whose liability is established. The compensation should be "as nearly equivalent as money can be to the plaintiff's loss. However, although stated in these wide terms, the traditional interpretation has restricted the categories of recoverable loss to injuries to the plaintiff's person and his property, and have not included not ecological harm.

b. Statutory Cause Of Civil Action

Civil recovery for environmental damage may be grounded in statutory provisions and a statutory cause of civil action enjoys an important advantage over common law actions. The nature and quantum of recovery for environmental injuries are a function of the statutory provisions rather than interpretation of traditional common law principles and may therefore include non-traditional valuation of harm to ecological resources.

Myriad examples of statutory causes of action in environmental litigation abound. There are provisions for civil liabil-

ity in respect of acts of pollution and abuse of natural resources in contravention of the provisions of general environmental legislation instituting comprehensive environmental management regimes. Legislation on extraction of petroleum from the continental shelf expressly provides that any resulting pollution causing loss, damage or injury gives rise to the "absolute liability" of the operator licensee or lessee. There are numerous opportunities for civil action against the state in respect of harm done to the environment within the boundaries of private property in consequence of state action, even if such action was intended to protect the environment. And statutory incorporation of the International Convention on Civil Liability For Oil Pollution Damage 1992 and the companion International Convention on the Establishment of An International Fund For Compensation for Oil Pollution Damage 1992 allow for recovery of "any damage" suffered as a result of an oil spillage. Whether Caribbean courts will take the statutory provisions at face value and import recovery for pure ecological harm is anybody's guess.

c. Civil Awards In Criminal Proceedings

Before leaving the possibilities of civil awards, note should be taken that many environmental statutes allow the judicial award of compensatory damages in criminal proceedings. Under the Environmental Protection Act 1992 of Belize, where an offender has been convicted of an offence under the Act, the Court may, at the time of passing sentence and application of the person aggrieved, order the offender to pay compensatory damages to that person. The amount awarded is by way of satisfaction or compensation for loss of or damage to property suffered by the applicant as a result of the commission of the environmental offence.

7.2.3 Administrative Assessment

The imposition of administrative assessment is often a preferable alternative to both the criminal process and the imposition of administrative penalties. As we have seen, environmental agencies in many jurisdictions have used powers of permitting and licensing to achieve broadly similar objectives. Only in Trinidad and Tobago, however, is there express statutory power to impose administrative assessment for conduct causing environmental harm. Here administrative civil assessments may be made directly by the Environmental Management Authority (EMA) or the Environmental Commission (EC) as part and parcel of the wider regime for compliance and enforcement. The assessments follow the service of an Administrative Order, which specifies the details of the environmental offence. The Order may direct remedial work, investigations and monitoring work to be undertaken by the person responsible for the violation. The assessment may take account of compensation for costs incurred by the Authority to respond to environmental conditions created by the violation of environmental rules, and compensation for damages to the environment associated with public lands. The assessment may also take account of any economic benefit or amount saved by a person through failure to comply with applicable environmental requirements. In determining this benefit account shall be taken of the nature, circumstances and gravity of the violation; any history of prior violations and any good faith efforts to co-operate with the Authority.

7.2.4 Economic Instruments

Economic instruments are increasingly being used to discourage bad environmental conduct and to reward environmentally friendly behavior by internalizing the environmental cost of environment-related practices. The theory is that con-

sumer choices in the market place will then penalize bad environmental processes and reward more cost-efficient environmental processes. Although cogent criticisms have been made of the applicability of market concepts in developing countries, Caribbean states have embraced them warmly. Environmental agencies have been specifically obligated to make use of current principles of environmental management, including the "polluter pays" principle; the polluter should bear the cost of the measures to reduce pollution to ensure that the environment is in an acceptable state. The principle also requires the polluter to compensate citizens for the harm they suffer from pollution. Agencies have been encouraged to seek to incorporate imposition of product charges where the product manufacturing process or usage is a significant source of pollution. Also to be encouraged are adjustments of direct government subsidies, or establishment of tax differentiation or tax incentives, to encourage beneficial environmental activities or to ensure that pricing reflects environmental costs more adequately.

The economic instruments used in the Caribbean contexts are many and varied. They include emission/effluent/pollution charges or taxes; user fees; product charges; deposit return schemes; administration charges; subsidies; tradable permits.

7.2.5 Emission/Effluent/Pollution Charges Or Taxes/Product Charges

These are essentially charges to use the environment and a direct application of the polluter pays principle. The charge is proportional to the level of pollution discharged that is likely to result in intolerable harm to the environment. The development of emission standard is therefore fundamental to the process; the charge may be formulated on a sliding scale to reflect an incentive to decrease

polluting discharges within or below specified ranges. Environmental management legislation frequently specifies the obligation to develop emission standards and criteria. Standards have been established to deal with sewerage and trade wastes, as well as for ambient water and air pollution. Noise emission standards are also being developed. Product charges provide an incentive or disincentive for a better or worse environment product and their imposition is mandated where the product manufacturing process or usage is a significant source of pollution.

7.2.6 User Fees

User fees are normally imposed to recover the cost of providing a service. Typically fees are charged for collection of garbage, visit to parks, forests, and specially protected areas, harvesting of marine and other resources, or viewing wild animals and endangered species, such as whale watching; or on cruise ship tourists. No general attempt is made to link the use fee to any intrinsic value of the resource; more surprising is the failure even to charge what the market is willing to pay.

7.2.7 Deposit Return Schemes

These schemes provide, on the purchase of a product, for a charge for the packaging or product, which if returned, results in the refund of the charge. The region has a very good history of deposit return schemes for glass beverage bottles. Institution of legislative arrangement for the return of plastic "PET" have not worked as well. In some jurisdictions this measure was reflective of protection of local industries from foreign competition rather than any desire for waste management. A consequence was the lack of incentives to facilitate packaging and preparation of returned PET bottles for recycling. This resulted in the bottles being disposed of by retailers in landfills at a cost to society and

the environment. An important objective of policy-makers is to expand this incentive framework to achieve broader waste management objective through recycling and reuse of such products as tires, plastic bags, batteries, and cars.

7.2.8 Refundable Bond System

This system provides for the collection of a financial sum as security against activity which could cause special environmental injury; the money being refundable on proof that the activity in question was carried out in an environmentally acceptable manner. The scheme has particular application to environmental conditions imposed for conducting developmental projects where the regulators have been determining bonds based on a percentage of the capital value of the project in the absence of any method of assessing the value of vegetation, reefs, and other environmental assets at risk. Bonds may also be used to induce satisfactory waste management practices.

7.2.9 Administrative Charges

This charge, often in the form of a non-refundable fee, effects cost recovery in respect of expenditure associated with management functions. Among existing charges are those intended to pay for the administration and enforcement of the permit and licensing system. Administrative charges are widely employed where costs are incurred in taking remedial action where offender fails to act – recovery allowed often as a civil debt. The notion also has application where individual benefits from environmental protection or improvement work and in the planning context.

7.2.10 Subsidies

A subsidy may take the form of a grant, loan, or tax incentive. Essentially it is some form of financial reward offered by regulators to encourage pollution control or

mitigate the economic impact of environmental regulation. In the latter context, the individuals, and corporations to meet compliance costs. At various times subsidies have been given on installation of solar heaters and gasoline. Regulators are statutorily urged to incorporate use of subsidies to encourage beneficial environmental activities.

7.2.11 Tradable Permits/Market Creation

A suitable regulatory framework may cause creation of a market for ownership of environmental 'rights'. Tradable pollution permits is the classical example of such a market. Regulators issue certain number of permits which (based on agreed emission standards and criteria) contain pollution within acceptable limits. Producers who keep their emission below their allotted threshold may sell or lease their surplus permits to other producers. This can lead to the trading of these commodities on the stock market.

The integrity of the system is heavily dependent upon calculations of the net emission from each permit holder, a rather elaborate science and inspection and monitoring. Legislative initiatives have called for the establishment of the infrastructure that would allow creation of markets in tradable permits. Requirements for development of emission standards, award of permits and monitoring and compliance have been made and comprise the basic market requirements. As a rule these are not yet in place. Further, there is no legislative treatment with the question whether a permit or license is transferable. Nor is there any indication that the total quantities of emission over a stated period of time have been estimated to reflect acceptable ambient conditions. nor with the central question whether the permit or license is transferable.

The principle of prescription provides a common law notion with implications for market creation in tradable per-

mits. Under the common law a polluter may, after a minimum period of prescription, provided other stringent conditions are satisfied, acquire a right to continue with a polluting activity. This right would appear to be transferable in similarity with kindred property rights such as easements and profits.

8 EMPIRICAL APPLICATIONS

What emerges to this point is the picture of a region coming to terms with the new art of integrating ecological valuation into its legal and regulatory systems. However, theory is one thing and practice another. Although many and varied opportunities exist to use innovative techniques to compute environmental values, empirical applications are rather disappointing. There is still a predominance of the traditional notions of the ecosystem as public goods 'at large'. Not only are such goods 'free' in the economic sense that they are not perceived to have any market value; natural resources are also 'free' in the sense of being outside the traditional categories of property rights and interests. There is no known case of the Crown asserting common law rights for loss to the biosphere, as distinct from clean-up costs and related expenditure. For example, the authorities are curiously silent concerning whether, in an action for public nuisance, the Attorney General may recover damages for environmental degradation as distinct from an injunction to enforce discontinuance and recovery of associated administrative expenses.

At the same time the traditional perspective must now be juxtaposed with modern notions concerning with the total value of an ecosystem or environmental 'good'. The objective is not to place an estimate upon the intrinsic value, a rather nebulous concept that some consider objectionable on philosophical grounds, but to

devise techniques and methods of arriving at the total use and non-use value of the natural ecosystem. Use values represent the value of outputs or services that the ecosystem provides and may be direct, for example where a coral reef directly provides for tourism, recreation, a fishing economy, tourist facilities, mariculture, pharmaceuticals, genetic material, aquarium and curio trade. Indirect use value may be provided as, for example, where a coral reef provides physical protection from storms, acts as a store of carbon and as a habitat for marine life. Non-use values relate to those values not usually market as goods, such as the value placed upon an environment free from air and noise pollution or the ecology of a swampland. The absence of a market in these services has led to the development of at least three innovative techniques for their valuation. Option value is the value placed on the environment in its present state, to keep it for use in the future. Existence or contingency value is the value an individual places on an environmental good to just know that it still exists, for example, the value placed on saving endangered leatherback turtles. Bequest value is the value placed by an individual on an environmental good for future generations.

These contradictory forces in Caribbean treatment of the valuation of environmental harm are evident in several recent incidents. For present purposes these incidents are described under the following titles — (a) the M/V Star II Limassol incident; (b) the Beef Island valuation; and (c) the Nariva swamp assessment; and (d) the Broderick case.

8.1 The M/V Star II Limassol Incident.

M/V Star II Limassol provides an example of the disjuncture between infliction of environmental damage and recovery of economic compensation. On 8th April, 1998 the Star II Limassol ran aground at

Holland Bay in the parish of Saint Thomas, Jamaica. The ship owners and salvagers sought and obtained permission to drop cargo in order to raise the vessel, which was then anchored in the waters of the Kingston Harbor. Whilst in the Harbor, large quantities of sugar and other noxious substances containing a high concentration of amphetamine was discharged from the vessel. The pollutants caused a massive kill of aquatic animal life and a loud public outcry followed. Jamaica's NRCA exercised its statutory power to "investigate the effect of any activity that causes or might cause pollution or that involves or might involve waste management or disposal and take such action as it thinks appropriate." The investigation considered the facts of what had occurred, the quantities and nature of the pollutants that had been discharged, their effect upon the marine ecology and the number of fishers affected. However, the NRCA Statement of Claim merely detailed particulars of expenditure on the investigation and contained the standard incantation of claim for general damages, costs, and "any other relief deemed just by this Honorable Court." There was no attempt at valuation of ecological damage to the Saint Thomas coastline or in the Kingston Harbor. NRCA officials were deterred by the "sheer novelty" of the notion that Government could claim for damage to the marine and coastal ecosystem. They repeated assumed common law notions that fish in the sea were, *res nullius* until reduced into captivity by Government or fishers and therefore valueless at the time of their contamination .

8.2 The Beef Island Valuation

The rapid economic growth of the British Virgin Islands during the 1980s led to concern for the islands' environmental infrastructure given that proposed developmental projects bore major implications for potential terrestrial, coastal and marine

intrusion. There were concerns that the developmental paradigm posed significant threats to the integrity of the fragile ecology of the BVI in general and Beef Island in particular. An additional complication arose from the fact that government policies and initiatives by the European Union and the Ramsar Secretariat were underway to consider Beef Islands wetlands for inclusion in the list of "Wetlands of International significance." The OECS/NRMU, acting in conjunction with the BVI and the EU, commissioned a valuation of the total economic value of Beef Islands' ecological services so that the economic value of environmental costs/benefits could be factored into the development equation. The study would thereby foster "sustainable development". The consultant reported in April 1998 and provided detailed economic ranking of a fixed set of components, functions and attributes of Beef Island wetlands in accordance with guidelines in the Ramsar Protocols. Separate Tables ranked these wetland characteristics in relation to Beef Island ponds, lagoons, mangroves, coral reefs, and sea grass. The ranking ranged among low (L), medium (M), high (H). The consultant wisely cautioned the need for adoption of a precautionary approach to consideration of development options since there remained considerable ignorance of the potential costs and benefits of wetland use or conversion, nor of their probabilities." Accordingly, adoption was urged of at worst a "Safe Minimum Standard" (SMS) decision when considering conversion of unique wetland resources "as long as the cost of doing so is not intolerably high." On the other hand, the lack of specificity in the rankings in, for example, monetary terms, and the failure to consider indigenous ecological characteristics other than those documented in the Ramsar Protocols were limitations to practical integration into the BVI planning process.

8.3 The Nariva Swamp Assessment

The 6000-hectare Nariva Swamp is the largest and most diverse freshwater wetland ecosystem in Trinidad and Tobago renowned for its unique flora, fauna, and species of animals. These special ecological features attract intense international scientific research, eco-tourists and local visitors, and with the accession of Trinidad and Tobago to the Ramsar Convention in 1992, the Nariva Swamp was designated as a wetland of international significance. In *Jabar v. The Minister of Agriculture, Land and Marine Resources* the High Court dismissed constitutional motions filed by large rice cultivators that had sought to regularize their occupation and cultivation of crown lands in the swamp. The rice farmers were judicially described as "squatters" and "trespassers" and the right of Government to declare the swamp a prohibited area was recognized. This cleared the way for the Government to undertake an assessment of the interventions in the wetland for the purpose of mitigating any adverse impacts arising from those interventions and preparing a comprehensive management plan for the area.

The task of undertaking the EIA and preparing the management plan was assigned to the Institute of Marine Affairs (IMA) which sub-contracted assignments for which no in-house expertise could be identified, to outside consultants. The Final Report was presented to the Government in 1998 and its recommendations and implications are still being studied. Of current interest was the section of the Report dealing with the valuation of pollution damage done to the swamp by large-scale rice farming. The Report cited permanent damage done to the original system both in terms of user values ("for utilization of natural products") and non-user values ("the existing value that individuals may receive for just knowing that the swamp is there"). Injury to the bequest value was also identi-

fied (the diminished value of swamp being "there for future generations").

Computation of the use value followed fairly standard criteria but for non-user values, a much more difficult art, was based upon "non-market" resource use contingency valuation. This method involves setting up a hypothetical market for the "good" being valued. A representative sample of individuals was then asked to provide bids (similar to an auction) as to the appropriate value price of the good. Once the bids were secured a mean amount was obtained. The mean price was multiplied by the estimated population comprising the market (the households in Trinidad and Tobago in order to arrive at the full social value. In this way the social value of the swamp was estimated at TT\$608m (US\$96.51m). Large-scale rice farming had produced major negative impacts an estimated 1200 hectares of the 6,000 hectares swamp. Using strict arithmetical calculations, the environmental damage of the rice farming was estimated at TT\$110.5m.

The Nariva Swamp assessment clearly produced very speculative valuations. It may be significant that the valuation exercise was undertaken for government management processes rather than for civil liability purposes. It is inconceivable that the method of computation of the value of the environmental damage would not raise constitutional and other challenges in an action against, say, the rice farmers.

8.4 The Broderick Case

Broderick v. Alcoa Minerals of Jamaica Inc. represents a typical application of common law principles to claims for redress for environmental harm. The plaintiff lived in the parish of Clarendon within a 1.5-mile radius of the defendant's Alumina plant. The roof of his house was constructed of galvanized sheets and he had to effect repairs to the entire roof and ceiling

because the zinc sheets had developed rust holes, through which the rain descended onto the plywood ceiling and the latches to which the ceiling was attached. Mr. Broderick attributed this damage to emissions from the defendant's plant' smoke stacks and brought an action claiming damages for nuisance and a mandatory injunction. At first instance Theobalds J. overcame the defendant's arguments, which noted their efforts to reduce the pollution and their concern for the environment as manifested by the vast sums of money expended to improve it. The Judge awarded Mr. Broderick J\$938, 400 with costs and granted the mandatory injunction allowing the defendant six months in which to "complete the necessary structural adjustments in order to eliminate the nuisance." The defendants appealed on grounds that are probably the best Caribbean advertisement for the limitations of the common law to provide genuine and comprehensive recovery for environmental damage and for this reason the grounds are worth setting out in full. The defendants argued that:

- they operated within worldwide acceptable limits for emission of air pollutants.
- they used the most modern and efficient control equipment.
- their powerhouse stacks of 250 feet high-emitted pollutants at a level higher than any existing plant in Jamaica.
- the production of alumina was vital to the economic survival of Jamaica and had been encouraged by successive governments for over thirty years.
- the matters complained of flowed naturally from activities authorized by special mining leases granted under the Mining Act.
- there was no scientific proof that the sulphuric acid emissions from their plant actually caused the corrosion of the plaintiff's roof.
- there was no scientific evidence that the plaintiff's loss had not been caused by the sulphuric emissions from other plants and factories in the vicinity or vehicles passing regularly on nearby roads.
- the estimate of damage should have been based had not taken account of (i) storm damage caused the year earlier by passage of hurricane Gilbert, (ii) the precise number of zinc sheets that required repair rather than the floor area, and (iii) the prices prevailing at the time of loss rather than at trial.

The Court of Appeal of Jamaica adopted the view that the care taken by the defendant and the legislative and economic arrangements under which the industry operated were not defenses to an action in nuisance. The Court was satisfied that respondent had adduced sufficient "technological" evidence of a causal link between emissions of sulphates from the appellants' operations and the sulphates which were the corrosive agents in his roof. In any event, causation was to be determined on a "commonsense" basis and there was no requirement to prove to scientific precision to what degree the emission from the appellants' plant as distinct from other sources contributed to the damage. It was for the appellants to join other tortfeasors through third party proceedings if that was thought appropriate. Moreover, the method of assessment of the cost of repairs was not unknown in the construction industry and as the environmental damage was of a continuing nature, the general rule of assessment of damage at the date of the breach was inapplicable. The Privy Council has refused to vary this judgment.

Although a victory for the plaintiff the relevance of the decision to wider recovery for environmental injury is rather doubtful. The mandatory injunction imposed by Theobalds J. was discharged on the grounds that the appellants had

taken substantial steps to minimize the environmental impact of the nuisance, that an award of damages sufficient to replace the roof with a highly corrosive resistant material could suitably remedy the plaintiff. The cost to the respondent was reduced by a third to reflect the appellant's success in relation to the discharge of the injunction. And most pertinently, the Court gave short shrift to the incipient claim for broader environmental harm. The Court dismissed the claim by the respondent of harm to his health and comfort by a malodorous stench from the appellant's mud lakes because "he did not suggest in what respect he suffered in health", and made no attempt to follow up on the wider issue of biospheric damage.

9 CONCLUSION

It seems clear that Caribbean jurisprudence is at the cross roads on the question of environmental management. A number of new and innovative techniques are available to bolster the role of the courts in environmental protection and valuation of environmental damage. Traditional approaches that omitted the environment from economics are now being challenged by the many legislative provisions and administrative opportunities that allow for the accounting of ecological damage. From this perspective it would appear that the integration of environment and economics is a done deal. The only remaining question concerns the speed with which this recognition will take hold in those responsible for statutory interpretation and administration, and the manner in which integration will be allowed to proceed. Infiltration/sharing of these approaches can take many forms:

- Persuasive value of judgments from other jurisdictions;
- Law journals - articles, etc.;
- Few extra-judicial speeches etc.;

- Judicial symposiums (organized by UNEP/ROLAC) "Enforcement and Compliance of Environmental Law in National Courts: the Role of the Judiciary" presented to and published in Caribbean Judicial Awareness symposium on Environmental Law and Sustainable Development, April 8-10, 2001, Glencastle Resort Hotel, Castries, St. Lucia. Symposium Proceedings.

Problem: Judges also restricted by the actual content of law (legislative provisions) within their jurisdictions). Tension between sharing these approaches and constitutional obligation to apply law of land.