CHRISTIANITY, ENVIRONMENTAL PLANNING, AND CANADA'S GREEN PLAN

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ABSTRACT

This thesis argues that Christian doctrine does not condone environmental destruction (as many believe); rather, Christian doctrine promotes care for the Earth and supports a number of norms which are consistent with the requirements of sustainable development and useful for planning for sustainable development.

Discussion begins with an explanation of the importance of norms and beliefs in planning, and proceeds to outline common criticisms of Christian norms and beliefs respecting the environment. These criticisms are considered valid to the extent that blame is placed on destructive practices which often characterize ill-formed social expressions of Christian norms and beliefs; however, these criticisms may be groundless in terms of a good understanding of Christian doctrine. This point provides a basis for examining Christian doctrine more closely, to see whether or not it condones destruction of the ecosphere.

Christian doctrine, logical argument, and a review of relevant literature are used to respond to the above mentioned criticisms. Analysis shows that Christian doctrine provides a basis for caring for the Earth and that one should not dismiss Christianity because of misguided attitudes and actions of professed Christians.

Nine ecological norms are derived from Christian doctrine. These norms are shown to be consistent with the requirements of sustainable development, and the findings of non-Christian scholars. Usefulness of these norms is demonstrated through a case-study evaluation of the ecological sustainability of Canada's Green Plan (GP). Applying Christian norms to the GP shows that the GP endorses some important environmental initiatives but is rooted in norms and beliefs which contradict each other and are inconsistent with the
requirements of sustainable development. Christian norms therefore prove to be helpful in pointing out weaknesses in the GP. Coupled with the facts that Christian theology does not promote environmental destruction, and that Christian norms enjoy the support of non-Christian scholars, the conclusion is that Christianity has been overly criticized respecting the environment and that Christian norms can and should be used to plan for sustainable development.
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CHAPTER ONE
INTRODUCTION

1.1 Objectives.

The principal objective of this thesis is to show that Christian doctrine does not condone environmental destruction (as many believe); rather, Christian doctrine promotes care for the Earth and supports a number of norms which are consistent with the requirements of sustainable development and useful for planning for sustainable development. A related objective is to evaluate Canada's Green Plan (GP) according to norms which are derived from Christian doctrine, but this is done only to demonstrate the usefulness of the derived norms and satisfy the principal objective.

It is necessary to discuss problems with Christianity, to show why the above objectives are worth pursuing. Indeed, criticisms against Christianity are strong ones; so, it would be unfair to pursue the stated objectives while ignoring these criticisms. But before proceeding to outline these problems it is worthwhile to briefly explain two important assumptions which form the theoretical framework for this paper.

1.2 Assumptions.

The first assumption is that norms are absolutely essential to planning. Forester claims:

*However technical it is, planning is an inescapably normative enterprise. Planning schools, then, must learn to help students to construct, assess, and present normative arguments because planning practice will demand these abilities - not incidentally but fundamentally.* (Forester 1989, 201)

Clearly, planning is not only concerned with identifying problems and facts, and implementing means to a given end, it is also very much concerned with identifying
appropriate means and ends. Planning presupposes some sort of a normative commitment, and a collection of norms which flows out of this commitment.

To use Forester's terminology, planners cannot identify whether problems have been framed properly, whether knowledge has been disseminated adequately, whether trust and consent have been managed fairly, and whether the public is well served, unless they adopt some sort of a normative stance. Likewise, when solutions to problems of acid rain, water pollution, and soil erosion are discussed, some set of norms must be appealed to in order to decide if a solution is 'good', or which solution is 'best'. This means that environmental planners must talk about norms, in addition to scientific facts, if they are to respond effectively to ecologic problems. It also means that if a planning document is flawed from a normative perspective, then it is flawed in a fundamental way. Thus, the norms this paper presents should be of interest to a profession faced with the prospect of ecological catastrophe, which finds itself in need of principles which will provide guidance.

The second assumption is that beliefs are essential to planning as well. George Grant (1969, 46, 47) claims that systems of beliefs give individuals their meaning and purpose in life. Whether true or false, systems of beliefs have an impact on both the personal and public lives of individuals. Therefore beliefs should be of interest to planners working in the public domain, whether the beliefs are Christian, secular, or whatever. Philosopher Arne Naess (1986) confirms this. He claims that public policies are rooted in beliefs (and closely related normative principles). Beliefs provide the foundation for public policy, and inescapably work themselves into public policy (and programs). More importantly, Naess claims that humans cannot respond to persistent environmental problems by simply tinkering with public policies,
they must go back and reexamine fundamental beliefs which contribute to the problems.

Others have come to a similar conclusion. Garrett Hardin (1968, 16), Henryk Skolimowski (1981, 21), Brown, Flavin and Postel (1989, 7), and the late E.F. Schumacher (1988, 83), have claimed that social or ecological woes cannot be solved merely by applying science, reason, and technology more earnestly, making structural changes, or throwing more money at problems, without first seriously questioning society’s predominant norms and beliefs. A classic statement of this position was made by historian Lynn White Jr.

What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny - that is, by religion.... What we do about ecology depends on our ideas of the man-nature relationship. More science and more technology are not going to get us out of the present ecological crisis until we find a new religion - or rethink our old one. (White 1967, 1205, 1206)

Even the technologically supportive, growth-oriented, World Commission on Environment and Development (WCED) admits that:

The world’s religions could help provide direction and motivation in forming new values that would stress individual and joint responsibility towards the environment, and towards nurturing harmony between humanity and environment. (WCED 1987, 111)

These comments show that planners must consider beliefs an important part of policy formulation, if they are to respond effectively to the challenges they face. The danger of seeking technical solutions without questioning fundamental beliefs (and norms) which may have led to the problem in the first place can be compared to the pruning of branches from a dead tree. White claims that "unless we think about fundamentals, our specific measures may produce new backlashes more serious than those they are designed to remedy" (White 1967, 1204).
The preceding assumptions provide a theoretical framework for this paper and also provide a partial explanation of why it is reasonable to examine Christian norms and beliefs which are believed to contribute to ecological destruction. The following section outlines concerns about Christianity and provides a fuller explanation for pursuing the stated objectives.

1.3 Problems associated with Christianity.

Lynn White Jr. believed that today’s ecologic problems are a result of beliefs and norms which are incompatible with global environmental health. Specifically, White claimed that widespread Judeo-Christian beliefs and norms are to blame.

White identified a number of problems with Christianity:

Man named all the animals, thus establishing his dominion over them. God planned all of this explicitly for man’s benefit and rule: no item in the physical creation had any purpose save to serve man’s purpose. And, although man’s body is made of clay, he is not simply part of nature: he is made in God’s image.

Especially in its Western form, Christianity is the most anthropocentric religion the world has ever seen.... Man shares, in great measure, God’s transcendence of nature. Christianity, in absolute contrast to ancient paganism and Asia’s religions (except, perhaps, Zoroastrianism), not only established a dualism of man and nature but also insisted that it is God’s will that man exploit nature for his proper ends....

... By destroying pagan animism, Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects. The spirits in natural objects, which formerly had protected man, evaporated. Man’s effective monopoly on spirit in this world was confirmed, and the old inhibitions to the exploitation of nature crumbled. (White 1967, 1205)

The ideas that nature exists only to serve humans, humans stand apart from nature, and God’s Spirit dwells only in humans lead to the conclusion that nature derives value only in proportion to its usefulness in meeting human needs. It has no independent value or moral significance. Nature no longer commands respect. It becomes logical to view nature as only
an unfeeling machine, to be shaped by human will.

Mention of human will brings science and technology to mind. White asserts that natural theology changed form over the ages. Humans stopped trying to understand God’s communication with them through the symbols of creation; instead, they concerned themselves with "the effort to understand God’s mind by discovering how his creation operates" (White 1967, 1206). Science gained a religious impetus and modern technology was explained "as an Occidental, voluntarist realization of Christian dogma of man’s transcendence of, and rightful mastery over, nature" (White 1967, 1206).

Walsh and Middleton (1984, 121, 122) confirm this by noting that Francis Bacon, the father of empirical science, was influenced by religious dualism. Whereas sin was a spiritual problem to be fixed by God, lack of dominion over nature was a problem humans could fix. Bacon thought that humans were under nature’s power; but, nature was a source of knowledge which would enable humans to regain their power over it, to achieve dominion and self-realization (Wilkinson 1980, 133). Bacon provided a strong incentive to the pursuit of practical sciences, or technology, and did little to slow the entrenchment of human/nature dualism in modern thought.

Human/nature dualism was given perhaps its final blessing by the Christian theoretician Descartes. His distinction between rational mind and lifeless matter, the free and the determined, ensured that nature would be viewed only as an unfeeling machine to be freely exploited for man’s benefit. The moral standing of earth was not considered (Walsh and Middleton 1984, 123). White continues this theme to its logical outcome.

But, as we now recognize, somewhat over a century ago science and technology - hitherto quite separate activities - joined to give mankind powers
which, to judge by many of the ecologic effects, are out of control. If so, Christianity bears a huge burden of guilt. (White 1967, 1206)

In other words, irresponsible use of modern science and technology cannot be understood apart from Christian attitudes towards the environment. Furthermore, the Christian notion of linear time, and faith in "perpetual progress" (White 1967, 1205) has done little to stem the tide.

White concludes by saying:

We are superior to nature, contemptuous of it, willing to use it for our slightest whims.... No new set of basic values has been accepted in our society to displace those of Christianity. Hence we shall continue to have a worsening ecologic crisis until we reject the Christian axiom that nature has no reason for existence save to serve man.... We must find a new religion or rethink our old one. (White 1967, 1206)

Interestingly enough, White proposes that St. Francis' Christian teachings offer hope for the future for a society which is unlikely to turn away from its Christian heritage entirely.

There is widespread support for White's criticisms of Christianity. Max Weber, in *The Protestant ethic and the spirit of capitalism*, held that:

In the Puritan concept of the calling the emphasis is always placed on this methodical character of worldly asceticism, not, as with Luther, on the acceptance of the lot which God has irretrievably assigned to man. (Weber 1930, 162)

Weber meant that many North American Christians had doubts about their predestined salvation. Hard work safeguarded them from temptation, kept them from the evil of wasting time, and led to their material success, which was interpreted as a sign of being called to heaven by God (Weber 1930). Economic growth had a religious basis, to the detriment of the environment.

Environmental philosopher John Haught (1986, 145) has noted that Christianity's
otherworldliness, if left unbalanced, tends towards the devaluation of humankind’s present environment, and an orientation to their ultimate environment. God’s promises of future salvation may be used to support apathy towards addressing environmental problems.

Skolimowski claims that biblical cosmology places value on human/human, and human/God relations, but is mute on the value of human/cosmic relations (Skolimowski 1981, 57).

Environmental philosophers Warren (1984, 57), Zimmerman (1988, 24,27), and Hwa Yol Jung (1986, 34, 35) make similar points. Warren claims:

Much of the human world has long been in the grip of a radically anthropocentric, or human-centered, morality. Until recently, virtually all Western philosophers assumed that human beings are the only proper objects of moral concern, and that all other elements of the natural world are mere things, available for human use. The Judeo-Christian tradition generally promulgates that view, though there are some exceptions. Anthropocentric morality is not the sole cause of the terrible damage which human beings have done to the world; population growth and technological "progress" can have the same result, even where the prevailing morality is not entirely anthropocentric. However, moral anthropocentrism helps to explain why the Western Nations have been more destructive than most. It has served to rationalize that damage and to prevent its being seen as a moral, rather than, say, merely an aesthetic issue. (Warren 1984, 57)

Government publications like Canadian water resources (see Healey and Wallace 1987, 9), and newspaper features like The Vancouver Sun environmental report (dated October 7, 1989) also support the idea that Christianity is opposed to sustainable development.

Even those who are supporters of Christianity survey their own tradition and are appalled by what they see. Keener (1982, 13) states that some Christian fundamentalists are more concerned with evangelism, and keeping themselves separate from an evil world which will soon be destroyed, than they are interested in stewardship of the planet. He feels that
interest in fundamentalism is inversely proportional to an interest in solving environmental problems. Granberg-Michaelson (January 5, 1988 lecture) confirms Keener's observations. And the late Francis Schaeffer concludes that some of Lynn White's observations are unfortunately true:

Any Christianity that rests upon a dichotomy - some sort of platonic concept - simply does not have an answer to nature, and we must say with tears that much orthodoxy, much evangelical Christianity, is rooted in a platonic concept, wherein the only interest is in the "upper story", in the heavenly things - only in "saving the soul" and getting it to heaven....

... Here, unhappily, Lynn White is right. He looks back over the history of Christianity and sees that there is much platonic thinking in Christianity where nature is concerned. (Schaeffer 1975, 40, 42)

Christian norms and beliefs are therefore particularly interesting because of the number of scholars who claim that Christianity is a cause of modern environmental problems. But, it may be unwise to dismiss Christianity because the history of Christianity (the cultural expression of Christianity) and Christian faith (the theological expression of Christianity) are two different things. One can consistently criticize Christian history, yet remain committed to the faith. This distinction will be developed further in the next chapter, and it provides a rationale for examining Christian norms and beliefs in some detail. A brief outline of procedure and organization of this paper follows.

1.4 Procedure and organization.

As mentioned, the theoretical framework of this paper is based on assumptions about the importance of norms and beliefs in planning. This paper will use this framework, logical argument, a review of the relevant literature, and a case study centered around Canada's Green Plan to achieve the stated objectives.

First, Christian doctrine will be examined to see whether or not Christian norms and
believes condone destruction of the ecosphere. Second, Christian ecological norms will be derived from theological premises and ecological principles. Sources of evidence and authority will include physical laws, the findings of scholars, and Scripture. These norms will be used to evaluate norms and beliefs which are found in the GP. Using these norms to identify strengths and weaknesses of the GP will provide a focal point to this paper and demonstrate the usefulness of Christian norms to environmental planners.
CHAPTER TWO

A CHRISTIAN RESPONSE

The purpose of this chapter is to show that there is a theological Christian perspective which does not suffer from the preceding criticisms, which provides a foundation for norms and beliefs that can be used to assess Canada’s Green Plan.

2.1 A basis for a Christian response.

It is possible to argue against the criticisms of Christianity on a number of different levels. First, one can argue with the terminology critics use. For example, White stated that according to Christianity man was to exploit nature for his purposes, as well as his "proper ends”. Berry (1979, 20) has drawn attention to the possible contradiction between the terms ‘purpose’ and ‘proper ends’. Certainly, they are not necessarily synonymous; but, this is a minor point.

Second, there are a number of views that are critical of secular beliefs in relation to the environment. George Grant, for example, confirms that western society has destructive beliefs about the environment, and he points out that secularism is largely to blame (Grant 1969, 22, 23). Secularism was born (perhaps reborn) of the Renaissance and the subsequent Enlightenment. Heilbroner states that secularism placed emphasis on gaining material wealth:

A second great current of change was to be found in the slow decay of the religious spirit under the impact of the sceptical, inquiring, humanist views of the Italian Renaissance. The world of Today elbowed aside the world of Tomorrow, and as life on earth became more important, so did the notion of material standards and ordinary comforts. (Heilbroner 1980, 32)

In other words, many humans are bent on continually increasing the quantities of their material possessions, to derive whatever pleasure they can out of their brief lives. Since the
planet is finite, environmental damage inevitably results. The implication is that at least one secular belief is to blame for ecological problems (and this belief resulted from renouncing the Christian belief that gaining material possessions is not the focus of life); therefore, one should hesitate before stating that Christian beliefs are the main cause of modern environmental problems. In fact, it could be argued that many of today's influential beliefs are post-Christian (see Ehrenfeld 1981, and Goudzwaard 1979).

A third response is to admit that both Christianity and secularism are to blame to some degree, but to focus on the distinction between cultural and theological expressions of Christianity. Wilkinson (1980, 104) comments on this distinction: "[I]t is not Christianity, but Christendom, which has caused the ecological crisis of which White speaks. That is, those who call themselves Christians have been guided at times by principles other than Christian." Wilkinson goes on to say:

... we must confess with humility that: 1) not all human structures have been affected by Christians and Christian principles; 2) not all Christians have felt or exercised any mandate to improve structures; and 3) not all that Christians have done with those structures has been ethically or biblically correct. (Wilkinson 1980, 74)

Francis Schaeffer (1975, 58) and Wendell Berry (1979, 20) have made similar points. Christians are not necessarily true to the faith. Dismissing the faith because of views and actions of those who claim to be representative of it is unfair. Grant (1969, 29) calls it "the Hermeneutical error of judging the truth of the faith from the crassness of the particular formulation. This would be as fair as judging the truth of Christianity from the writings of its most foolish theologians." The fact that Christians do not necessarily fully understand or adhere to the fundamentals of their faith provides a basis for re-examining Christian beliefs to
see if they are destructive to the environment as claimed.

2.2 The importance of moral standing.

An important question to keep in mind throughout the following discussion is whether humankind has a moral obligation to the non-human (as opposed to a moral obligation regarding the non-human) (VanDeVeer and Pierce 1986, 17; Cobb 1986, 171). Most humans admit that they have a direct moral responsibility to other humans, but fewer think that they have a moral obligation to animals, and even less feel a moral obligation towards trees, rivers, lakes, and soil (i.e., a concern for the environment itself). Most feel only an indirect responsibility to the environment. Thus, humans often show concern for the environment only as far as it serves human interests. This presents a problem.

Man may say that he cares for the tree because if he cuts it down his cities will not be able to breath. But that is egoism, and egoism will produce ugliness, no matter how long it takes. (Schaeffer 1975, 77)

Such a philosophy offers no stable protection against the exploitation of nature by man, since he can discern nothing in the relations of things to command his respect. (O’Donovan 1986, 52)

In other words, human self-interest may help control environmental damage for a time, but ultimately it leads to ruin. That is why Christianity is being criticized; it, supposedly, concerns itself only with human interests (see chapter one, as well as chapter three, for a more detailed discussion of the ecological problems posed by human self-interest).

Therefore, the question of whether biblical Christianity affirms a responsibility to the non-human environment provides a focal point for the following discussion, in addition to key criticisms from chapter one. The nature of this responsibility (e.g., are humans more or less accountable to humans, animals, or trees?) merits discussion; but, for the purposes of this
paper, whether or not humans are responsible to the non-human is a more fundamental issue. If Christian doctrine supports moral obligations to nature (i.e., affords nature ‘moral standing’), then it is incorrect to say that Christian beliefs condone domination of nature. Following are a number of points which show that Christian doctrine does support moral obligations to nature.

2.3 Good nature and an immanent God.

Genesis 1 shows God completing the ordering of the universe, and observing the results.

And God saw all that He had made, and behold, it was very good. (Gen. 1:31)

This account shows God not merely saying that all was good; rather, God also sees that everything was good. This is not merely an aesthetic appreciation, or interest in nature, on God’s behalf. Nature does not just have value because God likes it; it has value because God made it good (Schaeffer 1975, 47), out of love (O’Donovan 1986, 25). Nature has value independent of man valuing it (Wilkinson 1980, 205). Goodness is reaffirmed after the Fall (1 Tim. 4:4).

The continued existence of nature also deserves attention. Respect for nature is gained by understanding that God is immanent in nature and cares for it. An exclusively transcendent concept of God is dangerous, for it implies deism (i.e., a God who is largely irrelevant to earthly matters) (Spradley 1985, 72). A more balanced view holds that God is not only before and beyond everything, but also in everything and sustaining everything (Sire 1976, 23, 25). Scripture supports this more balanced view.

Acts 17:27, 28 shows that God is the environment for human life (Henry 1987, 473).
In addition, all things have come to exist, and hold together, through Jesus Christ. (The Christian concept of the Trinity should be remembered here.)

For from Him and through Him and to Him are all things. To Him be the glory forever. Amen. (Rom. 11:36; emphasis added)

For by Him all things were created, both in the heavens and on earth, visible and invisible, whether thrones or dominions or rulers or authorities - all things have been created by Him and for Him. And He is before all things, and in Him all things hold together. (Col. 1:16, 17, see also Heb. 1:2; 1 Cor. 8:6)

This means that Christ (God) is spiritually present everywhere (Eph. 4:10). Thus, nature has a mystical unity and inter-relatedness in Christ (Wilkinson 1987, 23). God participates in what goes on around us, and is made known to us by nature (Rom. 1:20).

God’s immanence could be interpreted as being for human benefit only, but the Bible denies this. The Bible depicts a God interested in all parts of nature, as opposed to a God concerned in keeping things working for humans (Ps. 104; Matt. 6:26, 28-30; Luke 12:6).

But the land into which you are about to cross to possess it, a land of hills and valleys, drinks water from the rain of heaven, and land for which your God cares; the eyes of the Lord your God are always on it, from the beginning even to the end of the year. (Deut. 11:11-12)

Even animals are dependent on God’s Spirit for the breath of life, so pervasive is God’s presence (Meye 1987, 37).

Three comments follow from the above points. First, humans should respect nature because it is good, not just because it benefits them. Further, humans should love nature, for God created out of love and continues to sustain nature out of love. A denial of nature is a denial of our own creatureliness, our own self. Second, since nature is good it is incorrect to think that nature is evil, and desire an escape to a better world (as some Christian ‘dualists’ are prone to do). Third, Christian doctrine supports the idea that humans should strive to
understand nature, and be immanent in it (i.e., active in understanding and preserving its
goodness, following God’s example). O’Donovan agrees:

Knowledge of the natural order is moral knowledge, and as such is co-
ordinated with obedience. There can be no true knowledge of that order
without loving acceptance of it and conformity to it, for it is known by
participation and not transcendence. In disobedience our perceptions of it
assume false and strange shapes. (O’Donovan 1986, 87)

There is given in creation an order of kinds and ends, within which our actions,
too, attain their intelligibility. Our task as moral agents is to participate in this
order, understanding it and conforming to it in what we think and do.
(O’Donovan 1986, 126, 127; see also Schaeffer 1975, 56, 57)

2.4 Stewardship, servanthood, and covenant.

The following verses are often quoted to demonstrate Christianity’s domineering
attitude towards nature:

Then God said, "Let Us make man in Our image, according to Our likeness;
and let them rule over the fish of the sea and over the birds of the sky and
over the cattle and over all the earth, and over every creeping thing that creeps
on the earth." And God created man in His own image, in the image of God
He created him; male and female He created them. And God blessed them;
and God said to them, "Be fruitful and multiply, and fill the earth, and subdue
it; and rule over the fish of the sea and over the birds of the sky, and over
every living thing that moves on the earth. (Gen. 1:26-28)

There is no question that the language used here is strong, and that humankind is placed in a
position of authority over creation. But Scripture must always be considered as a whole,
since different verses complement and balance each other. The following verse suggests the
type of rule which is appropriate:

Then the Lord God took the man and put him into the garden of Eden to
cultivate [till] it and keep it. (Gen. 2:15)

Two key verbs in this verse balance the intent of the preceding verses.
... human responsibility is described by two verbs, abad and shamar, here translated "till" and "keep". The first of these verbs, abad, is often translated "till", but it is sometimes translated "work" or "serve". And in fact, abad is the basic Hebrew word for "serve" or even "be a slave to." The other word, shamar, is translated variously "keep", "watch", or "preserve". The significant thing about both words is that they describe actions undertaken not primarily for the sake of the doer, but for the sake of the object of the action. The kind of tilling which is to be done is a service of the earth. The keeping of the garden is not just for human comfort, but is a kind of preservation. Both verbs severely restrict the way the other two verbs - subdue and rule - are to be applied. Human ruling, then, should be exercised in such a way as to serve and preserve the beasts, the trees, the earth itself - all of which is being ruled. (Wilkinson 1980, 209)

Unfortunately, literature which is critical of Christianity seldom refers to Genesis 2:15, resulting in what Henry (1987, 475) calls tendential exegesis (i.e., focusing only on humanity's divine image, transcendence, and dominion). But Genesis 2:15, and many other verses, clearly show that humans should care for - or steward - nature.

Biblically, dominion is not equivalent to exploitation. Dominion requires sacrifice and service on the part of those expressing authority. Authority requires becoming responsible and immanent. The best example is Christ who became immanent in the affairs of creation, in spite of His legitimate claim to transcendence and authority, and suffered and died for humanity and nature (Wilkinson 1982, 44-46; Is. 53).

Have this attitude in yourselves which was also in Christ Jesus, who, although He existed in the form of God, did not regard equality with God a thing to be grasped, but emptied Himself, taking the form of a bond-servant, and being made in the likeness of men. And being found in the appearance as a man, He humbled Himself by becoming obedient to the point of death, even death on a cross. (Phil. 2:5-8)

Likewise, Christians are called to be servants to the needs of humans and nature.

Berry (1979, 20, 21) makes the point that even before the Fall humans were given commands and responsibilities concerning the proper care of the gift of nature (e.g., Gen.
The giving of land, the promised land to be specific, was even more conditional after the Fall.

..., the good land is not given as a reward. It is made clear that the people chosen for this gift do not deserve it, for they are "a stiffnecked people" and have been wicked and faithless. To such a people such a gift can be given only as a moral predicament: Having failed to deserve it beforehand, they must prove worthy of it afterwards; they must use it well, or they will not continue in it long. (Berry 1979, 21)

Blessing is dependent on obedience for humans are covenant partners with God (Bloesch 1988, 19).

In Genesis chapter one, nature is a gift to humans, with blessings and conditions attached. In other words, humans are in a covenant relationship with God, and are able to enjoy God's blessings only if they fulfil God's commandments.

And it shall come about, if you listen obediently to my commandments which I am commanding you today, to love the Lord your God and to serve Him with all your heart and all your soul, that He will give the rain for your land in its season, the early and late rain, that you may gather in your grain and your new wine and your oil. And He will give grass for your cattle, and you shall eat and be satisfied. (Deut. 11:13-15, see also Gen. 26:12, 39:5)

If humans obey God, they will be blessed, and nature will be healthy. However, if humans are not faithful, nature's order is 'unmade', relationships with God and nature are severed, and harsh judgement follows (Dyrness 1987, 55, 61).

Now the generation to come,..., when they see the plagues of the land and the diseases with which the Lord has afflicted it, will say, 'All its land is brimstone and salt, a burning waste, unsown and unproductive, and no grass grows in it,... "And all the nations shall say, 'Why has the Lord done thus to this land? Why this great outburst of anger?'" Then men shall say, 'Because they forsook the covenant of the Lord, the God of their fathers, which He made with them when He brought them out of the land of Egypt. (Deut. 29:22-25)

For the land has a case against the inhabitants of the land, Because there is no faithfulness or kindness or knowledge of God in the land.... Therefore the land
mourns, And everyone who lives in it languishes Along with the beasts of the field and the birds of the sky; And also the fish of the sea disappear. (Hos. 4:1-3)

Henry (1977, 233, 244, 257) claims that commandments are an integral part of nature, and that natural order is linked to moral and religious order. This explains the relationship between blessings and curses of nature. Nature testifies to the morality of human actions through its fruitfulness (see also Goudzwaard 1979, 243).

One is continually brought up against the fact that morality, response to God, and fertility of the earth are interrelated.... One almost has the impression that if this order is respected, the fruitfulness of the earth will be more or less a natural consequence. The implication is that the created order has more than a natural function; it also has an expressive or symbolic purpose that relates it to the purposes of God. (Dyrness 1987, 57)

Again, the Bible confirms this:

See, I have set before you today life and prosperity, and death and adversity; in that I command you today to love the Lord your God, to walk in His ways and to keep His commandments and His statutes and His judgements,... I call heaven and earth to witness against you today, that I have set before you life and death, the blessing and the curse. So choose life in order that you may live, you and your descendants,... (Deut. 30:15-19)

These words seem relevant today. Since God has called humans to take care of nature (amongst other things) and humans are forsaking this responsibility as well as their covenant relationship with God, nature is suffering. The ecological crisis is calling the morality of human actions into question.

Yet the idea of covenant is still missing at least one dimension. God is not only in covenant relationship with humans, but also with the rest of creation. O'Donovan (1986, 63) has suggested that nature itself points to God's covenant relationship with it, because it shows God's commitment to something other than God's own self. The promises in Genesis 8:21,22
and Genesis 9:8-13 confirm God's commitment to the earth and its living creatures
subsequent to the Flood. God showed a moral responsibility to treat all living creatures, and
the earth, with concern for their continued well being. If God did not consider these things
morally important themselves God would have only made a covenant with humans regarding
them. The conclusion, again, is that nature has importance independent of human interests.

2.5 Nature's purpose in praising God.

Psalm 96:9-12 and 148 show that all of nature is commanded to praise God. God
thinks that nature's praise is important.

Since humans can have a negative impact on nature, and this impact may harm its
ability and God given purpose to praise God, a moral obligation to minimize this impact
exists. There is a mystery as to the actual nature of the way in which nature praises God. It
is as though some sort of dialogue exists between nature and God. Discounting this as simply
an anthropomorphism reflects an arrogant human tendency. God's response to Job, in the
form of a diatribe about nature, is a fitting response to humankind's hubris (Job 38-41).

2.6 The redemption of nature.

Scripture indicates that nature shares in the redemption of humans (Hos. 2:18-20;
Ezek. 36:33-35; O'Donovan 1986, 32; Henry 1987, 478, 486; Gregorios 1987, 90; Wilkinson

The Bible states that God created order as history's origin (O'Donovan 1986, 62); it is
good and has a purpose. Humans sinned in the garden bringing sin and disorder into the
world (Rom. 5:12). Christ came to deal with sin and negate evil (Rom. 5:19), redeeming
what was lost. The Son of God, who has been identified with nature via incarnation, is "the
first-born of the dead who leads creation... from death to life" (O'Donovan 1986, 33). At the end of history Christ will subject and reconcile all things to Himself. He will make them truly alive and bring the created order to a fulfilment which will affirm, yet transcend, its original goodness (O'Donovan 1986, 45, 63). Christ will have dominion as God's appointed heir to the heavenly Kingdom (I Cor. 15:24-28), and humans will reign with Him as joint-heirs. The Kingdom of God will be established.

Hebrews 2:8 claims that proper human dominion is only partially realized today (Wilkinson 1982, 49). Because of this, nature groans, as it awaits the day when human dominion will be perfectly displayed, in the manner originally intended by God.

For I consider that the sufferings of this present time are not worthy to be compared with the glory that is to be revealed to us. For the anxious longing of the creation waits eagerly for the revealing of the sons of God. For the creation was subjected to futility, not of its own will, but because of Him who subjected it, in hope that the creation itself also will be set free from slavery to corruption into the freedom of the glory of the children of God. For we know that the whole creation groans and suffers the pains of childbirth together until now. And not only this, but also we ourselves, having the first fruits of the Spirit, even we ourselves groan within ourselves, waiting eagerly for our adoption as sons, the redemption of our body. (Rom. 8:19-23)

Contrary to the belief of some Christians (based on Matthew 24:35) God does not consider nature a failure fit for the garbage bin. The new creation described in the Bible is called that only because it is radically more ordered than at present, not because it is a new creation ex nihilo (O'Donovan 1986, 58).

In those passages which speak of the passing away of the earth and the heavens... the original word is never one which signifies termination of existence, but parerchomai which is a verb of very wide and general meaning, such as to go or come to a person, place, or point; to pass a man through a bath, or a ship through the sea... That it implies great changes when applied to the earth and heavens is very evident; but that it ever means annihilation, or the passing of things out of being, there is no clear instance either in the Scriptures or in the classic Greek to prove. The main idea is
transition not extinction. (Seiss 1865, vol. 3, 371)

Nature could not be groaning and awaiting its predicted future redemption if it were to be discarded by God. God would not have made a covenant with nature, if God intended to dispose of it later. "The earth has been established, it shall never be moved" (Ps. 104:5).

Redemption of humans apart from nature is equivalent to gnosticism (O'Donovan 1986, 31).

Sabbaths depicted in Leviticus point to the redemption of nature as well (Henry 1977, 315). Sabbath was a weekly time of rest for humans, a once in seven year rest for the land, followed by a once in fifty year rest for the land, and rest for humans by way of cancellation of debts and repossession of lands lost. Sabbaths had both a social and an ecologic aspect. They demonstrated that human power was to be limited, over land and other humans (Berry 1979, 21). They also demonstrated that it was important for the land to be 'redeemed' or restored to its original productiveness. Just as "'redemption suggests the recovery of something given and lost'" (O'Donovan 1986, 54, 55), sabbath implies rest and the repossession of something originally given but lost.

Christians therefore have the role of being obedient to what God is trying to accomplish in and through them in bringing about redemptive transformation.

The new work is Re-creation, and for this God employs the very human beings who had originally spoiled his work. Creation progressed through stages: first stars, then the sky and sea, and on through plants and animals, and finally man and woman. Re-creation reverses the sequence, starting with man and woman and culminating in the restoration of all the rest. (Yancey 1988, 171)

Christians are to do God's will "on earth as it is in heaven" (Matt. 6:10).

Taking all of these points together the lesson is that God is deeply concerned for the future well being and existence of all of creation. God wills for all of creation to be
redeemed. God's will confirms creation's moral standing. Now one last point remains to be considered before summarizing responses to the criticisms of chapter one.

2.7 The uniqueness of humans.

The status of humans must be addressed because it is a controversial topic that pertains to the criticisms of Christianity.

"Adamah", in Hebrew, means dirt. Thus, Adam's name suggests his common physical origin with the rest of nature (Wilkinson 1980, 208). Humans were created, like all things, ex nihilo (Schaeffer 1975, 48).

Humans were also created in the image of God (Gen. 1:26). Meye (1987, 38) has shown that this declaration was in the first person plural, signifying something of the Trinity and the special nature of humans. No other beings were referred to in a personal way.

Human personality is exemplified by the personal communion God and Adam shared while they walked in the Garden together, and Adam named the animals. After God commanded Adam to name them, God waited to see what he would do (Wilkinson 1982, 44). Human personal relationships with God are uniquely unlike all other biblical depictions of relationships between God and other parts of nature.

Man is separated, as personal, from nature because he is made in the image of God. That is, he has personality and as such he is unique in the creation, but he is united to all other creatures as being created. (Schaeffer 1975, 50).

Humans are also special because God granted them authority to name the creatures in nature (Henry 1977, 152; Wilkinson 1982, 44), they were given animate life as help for them, and they were given responsibilities to take care of nature and participate in the divine plan for redeeming humans and nature. But it must be remembered that authority is to be exercised
responsibly because humans are accountable stewards (Wilkinson 1980, 231, 232).

Another unique human characteristic is that of morality. Those who are made in the image of God are moral creatures accountable to God’s will. This separates them from all other beings. People have a moral destiny (Henry 1977, 151, 152).

But just because people are unique does not necessarily mean that they are more valuable, or worthy of more moral consideration than other things. A hyena is unique as well. Or a rock for that matter. One cannot expect a rock, or hyena, to be the same as a human. An impasse results if uniqueness, in itself, is the standard by which the value of things is judged. Some sort of standard must exist which indicates which characteristics are particularly valuable, or morally significant.

Also, it is not necessarily valid to claim superiority because humans are the most moral creatures. A tree is not less moral than a human; it is not moral at all. Arguing that people are superior, on the basis of morality alone, is false because it amounts to an argument based on merit (Taylor 1981, 179). This argument would only be valid if trees were moral creatures too. Even then it is dubious how far it can be extended. The argument based on merit has significant flaws.

Another way to explain human worth is to look at the value of something relative to a known value. Humans may be superior in value to all other creatures by virtue of their personal characteristics being most similar to God’s. This is a more persuasive argument, if God’s existence is granted. The uniqueness of humanity is not a determining factor in itself. Some standard is needed by which comparisons can be made between various things. God’s personal characteristics, and God’s pronouncement concerning the status of humans, serve as
Christian standards. These standards suggest that humans are more valuable, and worthy of different moral consideration, than all other things because of their possession of the imago Dei. Therefore, humans may be expected to live in harmony with creation, but they are not to be sacrificed as easily as a cow might be sacrificed in order to correct for the present situation.

This does not mean that other things are not valuable, or worthy of moral consideration. The opposite is true. Christian doctrine suggests that there is a hierarchy of value in nature (and moral obligations to nature). Nature is made up of kinds of entities which stand in horizontal and vertical relationships to one another. Things can be related reciprocally within kinds, or ordered alongside each other. Things can also "be related by a directing of the one thing to the other: A is ‘ordered to serve’ B, and B is A’s ‘end’" (O’Donovan 1986, 32). Vertical relationships may exist within kinds, or they may not. Ultimately, all things stand in a solely vertical relationship to the Creator. All things have their ends in God, and are to serve God (O’Donovan 1986, 33, 229). One can argue that hierarchy is part of creation, not only functionally but also morally.

Hierarchy simply means that salient differences exist between different things so they must be treated differently. (Jesus’ comments on God caring for humans ‘more’ than sparrows are relevant here.) Schaeffer (1975, 75) comments: "On the one hand it is wrong to treat the fish as though it were a human baby; on the other hand, neither is it merely a chip of wood." Treating things differently does not diminish their value; indeed, the fact that all things in creation are valuable means that they have authority over human actions in some way (O’Donovan 1986, 123, 125). Just as love of neighbour is different from love of God,
yet ordered by and dependent on the love of God (O'Donovan 1986, 230), the authority of nature is different from God's authority, yet ordered by and dependent on the authority of God. Hence, humans truly have a moral obligation towards nature. They are to discover what the ends of different things are, in order to tend to them on the basis of this understanding (Wilkinson October 20, 1990 lecture).

This hierarchy is not human centred. "Christians [i.e., those who understand their faith correctly] reject the view that there is no distinction - and they reject the view that man is totally separated from all other things" (Schaeffer 1975, 51). No parts of nature are to be easily sacrificed. All things must be loved on the basis of knowledge of their being.

The idea of creation having a moral order says something about the age old problem of trying to make a transition from is to ought. The way creation is (neglecting the best attempts of humans trying to disorder it) informs human actions (O'Donovan 1986, 17). This means that ordered processes of the biosphere should be respected, and not tampered with. The true and the good are one (Henry 1977, 148, 244). The trick is in discerning how things stand in proper relation to one another, and then respecting, and abiding by, the order of that relationship (O'Donovan 1986, 77). The concept of an ordered, related, creation, is a reminder of God's immanence, and the interdependence of all things in God (Wilkinson October 20, 1990 lecture). The fact of human interdependence with the rest of creation counteracts dualist and transcendent thinking.

2.8 Summary.

All of chapter one's criticisms have now been responded to. A summary of these responses follows. First, humans should recognize that nature serves both its own, and God's,
purposes. Nature reflects God's good work and good character, and possesses value and rights independent of those humans ascribe to it. Therefore humans are morally obligated towards nature. Second, Christian beliefs are theocentric, not anthropocentric, because they are concerned with what God wills and what God deems important. Third, God is immanent in nature; therefore nature is both sacred and cared for. Following God's example, humans are called to take care of nature. Humans are to demonstrate dominion by assuming roles of immanent stewards responsible for redeeming and healing what has been entrusted to them. Otherworldly escapism and preoccupation with wealth are to be avoided. Fourth, God's promises of judgement and redemption serve as an incentive to be worthy stewards (publicly and privately), and as a reminder that the possibility of making a difference exists. Finally, Christians have been responsible for harming nature, but only because they have not acted consistently with their faith. The Christian faith must therefore be examined more deeply and lived more truly than it has been to date, not abandoned (as critics suggest). There appears to be hope for a Christian environmental ethic which promotes the health of nature. Planning norms and implications which flow out of this position are the subject of chapter three.
CHAPTER THREE

CHRISTIAN ENVIRONMENTAL PLANNING NORMS

The purpose of this chapter is to advance and discuss nine environmental planning norms, which a Christian worldview would suggest. The following norms result from the application of Christian worldview beliefs and norms to the discipline of planning. Although each norm will be connected to Christian beliefs and norms, reference will also be made to non-Christian authors, where their conclusions support Christian conclusions, demonstrating that the following norms are not only consistent with ecological realities, they are also acceptable to non-Christians.

The norms are as follows:

3.1 Economic growth must not continue indefinitely on a global scale.

Christian values and beliefs outlined in chapter two indicate that humans have moral obligations to avoid damaging the ecosphere. If it can be shown that unlimited economic growth destroys the ecosphere then it follows that Christianity should condemn growth and support the above norm. The following explains this norm and also why Christians should support it.

Daly and Cobb (1989) and Rees (1989) have used the Second Law of Thermodynamics to show that sustainable development cannot occur if economic growth continues. But before discussing the implications of the Second Law economic growth must first be defined.

The most common way of defining economic growth is in terms of Gross Domestic Product (GDP) or Gross National Product (GNP). As most people know, GNP and GDP are
important statistics, commonly used to gauge the economic health of nations and also the global economy. A nation's economy is deemed to be strong and vibrant only if GNP and GDP grow each year. And if GDP and GNP increase for the world's most wealthy nations, then the global economy is considered strong as well. But should either statistic diminish over consecutive financial time periods then an economy is declared to be in recession. Unfortunately, while these statistics are somewhat useful in gauging economic activity, it is dangerous to aim to continually increase them (as most nations try to do). The Second Law of Thermodynamics helps explain why this is so.

The Second Law states that "the only processes that can take place are those in which the net change in entropy of the system plus its surroundings increases (or, in the limit, remains constant)", and that "in an isolated system, the only processes that can occur are those that have an increase in entropy associated with them" (Van Wylen and Sonntag 1978, 214, 215). This means that the entropy of a system cannot decrease unless the entropy of its surroundings increases, and that degradation of material and energy resources always occurs in closed systems.

Interestingly, modern economies are closed systems, to the extent that they rely on non-renewable resources like oil, gas, and mineral reserves. According to the Second Law, the faster humans use up non-renewable resources, the faster they become depleted and the faster the earth becomes polluted by waste products. Rees states:

All modern economies are dependent on fixed stocks of non-renewable material and energy resources. The Second Law therefore declares that they necessarily degrade the very resource base which sustains them. Our material economies treat other components of the ecosphere as resources and all the products of economic activity... are eventually returned to the ecosystem as waste. Thus, while we like to think of our economies as dynamic, productive systems, the
Second Law states that in thermodynamic terms, all material economic "production" is really "consumption". (Rees 1989, 6)

Even recycling and pollution abatement initiatives can be counterproductive, when non-renewable resources are consumed to provide energy for recycling processes and raw materials to build pollution abatement equipment.

Fortunately, unlike the economy, the ecosphere is not a closed system. The earth receives energy from the sun, which drives the process of photosynthesis. Photosynthesis is responsible for net primary production (NPP) and renewable resources. It also contributes to an increase in global order, or a decrease in global entropy. This is possible because while global entropy (i.e., system entropy) decreases, solar system entropy (i.e., surroundings entropy) increases. Photosynthesis is important not only because it is the basis for all life, but also because it can potentially balance out entropy increases caused by harvesting renewable resources, for as long as the ecosphere remains healthy, and the sun continues to shine.

Nevertheless, Rees notes that NPP is strictly limited by nutrient availability and solar flux; therefore, there is a limit to the quantity of renewable resources that can be harvested sustainably, on a continuous basis. If this limit is exceeded, then the Second Law states that the ecosphere will be degraded, NPP will decrease, and both humans and non-humans will suffer. Rees states: "It follows that if the rate of conversion [to economic products] persistently exceeds the rate of formation of ecological capital, economic activity will inevitably lead to the destruction of the ecosphere" (Rees 1989, i). By definition, this is already occurring in the case of human consumption of non-renewable resources. And in the case of renewable resources humans are consuming a disturbing amount of the ecosphere’s yearly production. Brown states:
... Vitousek and his colleagues estimate that humans now appropriate close to 40 percent of the land’s net primary biological product. As our own share continues to increase, it becomes more difficult for other species to survive. Eventually, life-supporting systems could begin to unravel. (Brown 1990, 7)

It is therefore clear that increasing consumption of renewable and non-renewable resources harms the ecosphere. Unfortunately, GNP and GDP include economic activities which consume nature; therefore, unlimited growth of GNP and GDP - the kind of growth most nations aspire to - will ruin the environment. Of course, GNP and GDP may need to grow somewhat for poor nations struggling to increase their standard of living to meet basic needs. But there is no reason for them to continue to grow indefinitely in any nation (especially rich nations), or globally for that matter. The Christian basis for this conclusion can be found in ideas outlined in the previous chapter. Scripture denounces human greed, especially when it is expressed at the expense of others and the environment.

3.2 Plans must emphasize a definition of stewardship which balances human rights with human obligations to the environment.

There are possibly many ways of defining stewardship. But three definitions are most popular. Each definition hinges on the idea of ownership of nature. Following are three popular definitions, and a rationale for accepting a Christian definition.

One way of defining stewardship is to say that nature belongs to the human race, and that present and future generations should steward nature exclusively for the benefit of humans. This is a human-centred (i.e., anthropocentric) definition of stewardship. Although there are a number of reasons for accepting this definition there appear to be more important reasons why this definition should be rejected.

First, anthropocentrism is problematic because it is difficult to justify philosophically.
Recall that anthropocentrism describes a theory in which only humans possess rights and are granted direct moral consideration. A number of philosophers have challenged this theory.

For example, Tom Regan states:

> Human beings have inherent value because, logically independently of the interest of others, each individual is the subject of a life that is better or worse for that individual. Because of the type of value that human beings have, it is wrong (a sign of disrespect and a violation of rights) to treat humans as if they had value merely as a means (e.g., to use humans merely to advance the pleasures of the group). In particular, to harm human beings for the sake of the profit or pleasure of any group is to violate their right not to be harmed. (Regan 1980, 116)

Following the same line of argument Regan shows that since animals (e.g., whales) are also ‘subjects-of-a-life’, then they must possess rights, if humans do (Regan 1980, 116, 117).

Callicott has used quantum theory to make a similar point. He states:

> If quantum theory and ecology both imply in structurally similar ways in both the physical and organic domains of nature the continuity of self and nature, and if the self is intrinsically valuable, then nature is intrinsically valuable. (Callicott 1985, 275; see also Jones 1987)

This line of argument is even more compelling than Regan’s. Callicott shows that humans are in such an intimate relationship with the nature that it is inconsistent to claim that the former have moral standing while the latter does not. Moreover, intimacy suggests that humans demean themselves when they say that nature has no moral standing.

Johnson provides another good reason for questioning anthropocentrism:

> When males legally enslaved females, many "sincerely" believed that wives were morally inferior to their husbands. But men, talking to men about their inferior women, were wrong: To think otherwise is sexism. And whites, talking to whites about their inferior blacks, were wrong: To think otherwise is racism. Now, what about humans, talking to humans about "the inferior creatures"? Reflection along the lines just sketched leads one to refuse to assume that humans must be morally special just because they are human. (Johnson 1984, 338)
The conclusion is that anthropocentrism suffers serious philosophical problems.

Second, it seems clear that anthropocentrism leads to environmental damage. Although human self-interest may be expressed in ways congruent with ecologic health, it appears that humans have historically demonstrated a greater tendency to destroy the environment because of self-interest. For example, fishing companies from different nations are aware that overfishing is leading to population extinction, yet the trend is continuing because it is in the interests of each company to catch as many fish as possible before others do. In other words, the tragedy of the commons occurs because of calculated self-interest (Hardin 1968). The question here is not so much whether or not self-interest is good or bad in itself, but whether it is sufficient to prevent environmental damage. Until history proves otherwise is seems safer to say that it is not.

Of course, one can respond by saying that once humans accept the seriousness of environmental problems calculated self-interest will be replaced with enlightened self-interest, and humans will begin to make better long-term decisions. There are a number of arguments which can be made for and against the virtues of enlightened self-interest; however, the most important point is that authors cited in chapter one have made a strong case against anthropocentrism (human self-interest) found in Christianity. Suffice it to say that if anthropocentrism (enlightened or otherwise) is acceptable, then the case against Christianity largely falls apart and the task of this thesis becomes much easier.

Third, anthropocentrism is inconsistent with Christian doctrine. Chapter two showed that Christianity is theocentric. That means that God’s ideas about what counts take precedence over human-centred ideas. Specifically, humans are to be concerned about the
effects of their actions on the environment, even if their own health is not in question. This means that humans must resist wiping species regardless of how small the ecological consequences are. This point, taken with the preceding points suggests that anthropocentrism places too much emphasis on human rights, and not nearly enough emphasis on human obligations to the ecosphere.

Another way to define stewardship is to say that the environment ‘owns’ humans (because humans are simply one species among many, imbedded in nature, and not possessing any special status), and that humans must steward the environment for the sake of its health. According to this definition of stewardship "the good of the biotic community is the ultimate measure of moral value, the rightness or wrongness of actions" (Callicott 1980, 188; emphasis added). This is called an ecocentric definition of stewardship, because the good of the ecosphere is the ultimate criterion for judging the worth of human actions.

As opposed to the previous definition, this one admits that humans have moral obligations to the environment, even if it does not seem to be in their best interests to do so. Thus, humans would likely be much less willing to allow species which are not highly valued to become extinct, if this definition was accepted. However, ecocentrism suffers from making environmental health the ‘ultimate measure’ of right and wrong. For example, it does not seem just or fair to suddenly eliminate a billion people from the world’s population, regardless of the benefits to nature. Tom Regan (1986, 204) calls it "‘environmental fascism’". But if environmental health is an ‘ultimate’ goal, and humans are simply one species among many (i.e., not possessing any special status), elimination of humans becomes a viable option.
In addition to this philosophical problem, ecocentrism poses practical problems. It would be difficult or impossible to express through public policy. Public acceptance of ecocentrism (regardless of its ecological benefits) is guaranteed to be low, because of its harsh implications for humans. Even Callicott (1980, 198) admits this. For these reasons, ecocentrism does not appear to be a viable alternative to anthropocentrism.

A third definition of stewardship is based on Christian beliefs. Christian beliefs state that God owns the earth, and humans are obligated to care for God’s earth. Accordingly, humans are not only responsible to serve God and other humans, they are also responsible to serve the needs of nature entrusted to them. Humans, on one hand, are to be treated carefully because they are made in the image of God. Nature, on the other hand, is to be respected because it has moral standing and value. Human needs are to be balanced against the needs of the environment. The main benefit of this definition is that it avoids the extremes of the previous two definitions because it does not place too much attention on humans, or on the environment as a whole. This definition includes valuable insights from the previous two definitions, and helps resolve the tension between them.

Truthfully, none of the above points prove that anthropocentrism and ecocentrism are ‘wrong’, and that theocentrism is correct. But they do suggest that there are at least some good reasons to favour theocentrism. The discussion has also provided categories which will be useful in evaluating the GP.

3.3 Humans must be held legally and financially accountable for damaging nature.

It is increasingly being recognized that polluters should be punished based on how much environmental damage they have caused. Failures by companies to meet environmental
obligations can now result in large fines, as well as criminal charges (e.g., Exxon and the Valdez incident). This principal follows one well established in modern jurisprudence (i.e., the punishment should fit the crime).

The Christian idea of covenant, mentioned in chapter two, also provides a basis for this principle. Recall that covenant refers to the promise of God to bless Israel (or, God’s people) if it observed God’s commandments, and punish Israel if it did not. God’s punishment for disobedience often had an ecological aspect, which strongly impacted the livelihood and wealth of the Israelites. So one can find in scripture a relationship between obedience to Christian principles and prosperity and blessings. Therefore one can conclude that Christian doctrine provides a basis for penalizing those who disregard Christian ecological norms.

One problem with implementing the above norm has to do with deciding on appropriate punishments. The Bible does not provide answers in this regard; but, fortunately, there is some agreement amongst scholars and environmental experts about the forms that punishment can take, and some guidelines for appropriate levels of punishment already exist. For example, environmental taxes have received a great deal of support from environmentalists. Taxing consumers is one sure way of discouraging the purchase of environmentally harmful products. Taxation is also an efficient pay of imposing penalties, compared to the cost of taking polluters to court. And tax revenues received by government can be used to finance environmentally sustainable programs (Postel and Flavin 1991).

Carbon taxes seem appropriate because they would discourage the use of oil and coal, both of which are non-renewable resources which contribute to the greenhouse effect. Indeed,
carbon taxes are currently undergoing serious international discussion (Flavin 1990, 27, 28). Chlorofluorocarbons (CFCs) are another logical candidate for taxation, in light of the earth’s ozone problem. The United States is already taxing CFCs at two times the current market price, and will increase this tax by three hundred percent by 1999 (Postel and Flavin 1991, 182).

However, legal penalties should not be underemphasized. They are especially necessary when the stakes of non-compliance are very high, as in the cases of the nuclear power industry and species extinction (Postel and Flavin 1991, 172, 182). In these cases, strict control of human activities is required, regardless of human willingness to pay for their mistakes. Obviously, money cannot bring an extinct species back. Neither can taxes easily compensate for the $358 billion that the Soviet Union will spend cleaning up the Chernobyl accident (Postel and Flavin 1991, 172, 182).

It is therefore reasonable to expect that the GP should advocate carbon and CFC taxes, in addition to legal punishments, to combat the world’s most serious environmental problems. And although the Bible does not specifically recommend taxes, or legal punishments, for polluters, it is clear that the Bible does support the polluter pays principle as a concept, based on the idea of covenant discussed in the previous chapter.

3.4 Limitations of the market, technologies, and human abilities must be recognized, because failing to do so contributes to environmental problems.

The Christian basis for this norm relates back to the first two of the ten commandments. They are commandments against idolatry. Daly and Cobb define idolatry as "treating as ultimate that which is not ultimate, treating as whole that which is not whole, and offering ultimate commitment to that which is worthy of relative commitment" (Daly and
Cobb 1989, 395). Misunderstanding the respective roles of the market, technology, and human abilities, and placing excessive faith in either, is called idolatry, according to this definition.

More importantly, the Bible claims that idols shape the lives, and societies, of those who have faith in them, because the faithful ascribe ultimate power and existence to them (Goudzwaard 1984). Idolatry leads to a loss of senses, personality, and the ability to act freely (Ps. 115:4-8). In other words, the more people entrust themselves to the market, technology, or human abilities the greater is the risk of becoming a slave to them. The following discussion outlines some of the dangers of misunderstanding the respective roles of the market, technologies, and human abilities, and lends substance to Christian concepts which support the above norm.

Market ideas (like private property, self-interest, competition, less government intervention in business, global market economies, setting prices on market externalities to account for environmental damage, and economic growth) are increasingly being looked to for solutions to environmental problems. This, no doubt, is partially due to the fact that planned economies in eastern Europe and the former U.S.S.R. have failed so miserably, with devastating environmental consequences (Postel and Flavin 1991, 170). Indeed, the collapse of non-market economies suggests that market ideas must be adhered to, even more strictly than in the past, in order to make good decisions about the environment. This theory is dangerous, for the following reasons.

First, it is clear that material growth cannot continue indefinitely without destroying nature. Environmental plans which promote material growth are rooted in at least one
defective worldview belief, and are destined for failure.

Second, as mentioned, self-interest poses practical and philosophical problems. Self-interest has a tendency to aggravate environmental problems. (If not, then why is there so much concern about ‘Christian anthropocentrism’?) Self-interest also seems difficult to defend on rational grounds. So it appears unreasonable to expect human self-interest to come to the rescue of the environment on its own and to expect humans to commit themselves even more to it.

Third, putting prices on market externalities (i.e., unanticipated, unaccounted for, and undesired impacts on the environment, caused by economic activities) is not a simple task (Daly and Cobb 1989, 55). It is impossible, for example, to determine what part of the increase in the incidence of skin cancer in Australia has resulted from ozone thinning (as opposed to the modern trend to wear less clothes in the sun), what appropriate compensation for the damage would be, and who would be responsible to pay for it. Even if externalities could be well priced, this would not ensure that the scale of the market remained sustainable, neither would it compensate for the anthropocentrism of the market. It would only mean that environmental destruction would become more expensive over time (Daly and Cobb 1989, 59). So people are mistaken if they think that the invisible hand, with a little help from us, will provide firm guidance concerning environmental problems. The market is, and will continue to be, a helpful, but crude mechanism for making decisions about the environment.

Fourth, Daly and Cobb have shown that the global market economy has led to problems in the Third World.

Following the pressures of the market and the advice of economists, they have given up their relative self-sufficiency, have specialized, and have entrusted
themselves to the magic of the market. Their economies are based on the export of one or two commodities. They must export to survive, for they can no longer feed themselves, and they cannot pay for food imports without exporting. Nor can they produce domestic commodities without imported inputs such as machinery and fertilizer. Their dependence on the market is complete. Meanwhile the terms of trade progressively deteriorate. They have little influence over the prices of their exports, which seem to be manipulated by international corporations with an interest in low prices. (Daly and Cobb 1989, 229)

Daly and Cobb show that global trade often leads to trade imbalances which lead to debt. Debt often leads to desperate financial measures which can have disastrous effects on the environment. As debt increases, the poor must focus on paying it off, regardless of long-term effects on ecologic carrying capacity (Rees 1989, 17). A vicious circle ensues: poor countries sink deeper into both poverty and environmental ruin. The WCED (1987, 67-75) confirms that poorer countries are often dominated by richer countries, resulting in environmental problems. The conclusion is that global market trade, another key market principle, is worthy of only partial commitment.

Technology also deserves attention, because, like the market, it is considered an indispensable tool for solving social problems (Ehrenfeld 1981). One problem is that technology is not simply a collection of neutral tools, to be used in accordance with human values and needs. Instead, technology appears to have become a much more dangerous and pervasive phenomenon, actually affecting the way humans think, what humans value, and how humans perceive and structure reality. Technology has become more than a tool, by autonomously exerting control over humans (Winner 1977). The automobile serves as a telling example of how this is so. Lowe states:

Perhaps more than any other invention, the automobile embodies author Jacques Ellul's observation about all technologies: it makes a good servant but
a bad master. Yet obeying the demands of the private car has become a passive routine for many of the world’s cities. Automobile access has dictated the very character of urban life, most obviously in the design of the modern city. Vast roads and parking lots distort cityscapes in proportions that dwarf and intimidate humans. Once all available surface space has been surrendered to private cars, engineers turn to space overhead and underground. In a final gesture of submission, entrepreneurs in Yokohama, Japan, recently opened a floating parking lot in the local bay. (Lowe 1991, 57)

This example clearly shows how humans have adapted to demands of technology (in this case the automobile) they originally set in motion, and how they have become blind to absurd solutions to absurd problems.

A second problem is that technologies have become much more powerful over the years. Therefore human bondage to technology has the potential of resulting in serious environmental damage, and humans are now less able to discern technology’s future impacts (Ehrenfeld 1981). So humans should be careful about entrusting themselves to newer and more powerful technologies.

Human abilities to solve social problems should also not be overestimated. Enlightenment philosophers placed supreme faith in science and human abilities to solve problems (Friedmann 1987, 225, 226, 412). Since the Enlightenment, and perhaps more today than ever, humans have marvelled at their ability to solve problems by devising ever-more sophisticated scientific experiments, technologies, and social structures. But human abilities and inventions have not delivered the goods. In fact, most environmental damage has occurred since this belief became predominant. Thus, Ehrenfeld (1981) has suggested that humans need to re-evaluate their belief in their own abilities. And Schumacher has pointed out:
... the changes of the last twenty-five years, both in the quality and quantity of man's industrial processes, have produced an entirely new situation - a situation resulting not from our failures but from what we thought were our greatest successes. (Schumacher 1988, 14)

Concerns about the market, technology, and human abilities do not mean that they are useless, just limited in terms of the role they should be expected to play in mitigating environmental problems. Humans should not overestimate what the three have to offer; instead, they should pay much closer attention to the above problems, to begin with.

In conclusion, norm five follows not only from Christian concern about idolatry but also from the recognition that the world, and the environment, are far more complex than humans can explain or understand. Thus, any human invention is based on simplification of reality, and is limited in terms of the role it should be trusted to play in the world (Daly and Cobb 1989; see also Ehrenfeld 1981). It will be interesting to see if the GP understands this, and whether it mentions any of the above problems.

3.5 Humans must think deeply about values and beliefs which have led to the present environmental problem, and avoid focusing on factual data only.

The Bible clearly states that values and beliefs play an important role in people's lives. The above norm is based on the Christian idea that overlooking the role of values and beliefs results in idolatry.

The best reason for talking about beliefs and values, and their consequences, is that it helps people understand that some influential values and beliefs are simply inconsistent with reality and environmental health (e.g., the belief that material growth can continue indefinitely without harming the environment, or the belief that humans have no direct obligations to nature). Chapter one showed that society must examine problem values and beliefs, otherwise
symptoms of environmental malaise will be recurrent.

Having said this it is worth saying what is not at the root of environmental problems - a lack of scientific information. The reason for saying this is to counteract the modern tendency to focus on 'the facts' and overlook 'values' and 'beliefs'. It can be argued that planners have tended to pay too much attention to facts, in hopes of obtaining a rational basis for addressing planning problems (see Ravetz 1986, 423). But as important as it is to gather good information, information is limited, for two reasons. One, ecosystem behaviour is not very predictable (see Holling 1986). "When asked by policymakers: 'What will happen and when?' the scientists must, in all honesty, reply in most cases: 'We don't know, and we won't know, certainly in time for your next decisions’" (Ravetz 1986, 417). Thus, it may be unwise, and extremely costly, to place a great deal of emphasis on gathering more and more information to predict behaviours of ecosystems. Second, and more importantly, planners and scientists can gather as much information as they like about what causes environmental damage, and what will happen to the environment if society continues on its present course; but, if society does not really value the environment, or believe that environmental health is worth maintaining, then this information will turn out to be relatively useless because people's behaviours will not change.

The point is that facts do not motivate people by themselves. Facts do not mean much until they are interpreted in light of values and beliefs. Ravetz confirms the importance of values:

...the problem that faces us is that the sum of knowledge and power is now revealed to be insufficient for the preservation of civilization. We need something else as well, perhaps best called "control". This is more than a mere union of the first two elements; for it involves goals, and hence values; and
also a historical dimension, including both the remembered past and the unknowable future. (Ravetz 1986, 416)

Ravetz suggests that a balance must exist between efforts to clarify values and efforts to gather more information. This statement supports the above norm.

In order to avoid the problem of idolatry Christians must never downplay the importance of norms and beliefs. This means that they should be expected not to place too much emphasis on information, but should have a balanced appreciation for both good information and good values.

The fundamental question here is not which values and beliefs the GP advocates specifically (although they are important and will be assessed according to other norms from this chapter). Rather, the question is whether or not the GP devotes enough space to a discussion of problem values and beliefs, and whether or not the GP recognizes the problem of focusing too much on information (or suffers from it). The argument is that facts usually receive too much attention. The next chapter will determine whether or not this is true in the case of the GP.

3.6 Individuals must adopt new values and beliefs where old ones are inconsistent with environmental health.

Thomas Kuhn (1970) first popularized the idea that science progresses in leaps, as shared paradigms are subject to intense scrutiny, and are eventually abandoned in favour of newer, dramatically different, ones. Paradigm change is now considered key to changes in human behaviour, leading to the conclusion that society must change its values and beliefs (i.e., paradigm) in order to behave in a manner consistent with environmental health.

But paradigms are not only societal, they are also personal. Therefore paradigm
change requires personal change. Humans must individually understand, and change, basic perceptions and values about the world for the sake of the environment. New planning approaches are not enough to correct prevailing (destructive) norms. Ehrenfeld states:

With respect to planning, I fear that no amount or quality of it can ever compensate for the inevitable damage wrought by a self-destructive society and a diseased way of life. (Ehrenfeld 1981, 63)

It is tempting to blame big-business, big-government, or poor planning for our problems, but businesses, governments, and planners reflect priorities of those they serve. Industries do make useless and harmful products, but consumers buy them. Governments do abuse their powers, but citizens vote them in. Planners often plan poorly, but society often provides them with poor terms of reference. So it is imperative to recognize that until people choose to change nothing will change.

Christian doctrine confirms that personal change is key. Repentance requires that one must change one's attitude, values, and behaviours when they do not match God's expectations. In the case of the environment, repentance is needed when an individual acts contrary to God's command to care for nature. The conclusion is that the GP must recognize that personal change is key and give adequate attention to this point.

3.7 Humans must recognize that: "unless... dominion is used for the benefit of the dominated, it is misused" (Wilkinson 1980, 213, 214).

Wilkinson (1980) has shown that Christian dominion does not provide an excuse for domination of nature or neighbours; rather, dominion leads to domination only when it is exercised irresponsibly. Domination results from misinterpretation and misapplication of Christian concepts.

Dominion (or power) exists for the purpose of doing justice (Deut. 16:20). Justice can
Justice, biblically, is the rendering, amidst limited resources and conditions of brokenness, of whatever is required for the fullest possible flourishing of creation. That which makes for wholeness in nature, psyche, and society is "just". (Rasmussen 1987, 121)

Dominion therefore exists for the purpose of seeking wholeness for human and non-human communities. Yet, this definition is too general to be useful. Specific requirements of justice make the definition more meaningful.

One key requirement is identified in norm seven: The degree to which the poor (or the dominated) are taken care of indicates how well justice is being done (see Ezek. 34:2-4). This means that it is unjust that a minority of the world’s human population consumes the majority of the world’s resources (WCED 1987, 33). It is equally unjust that the human species consumes so much of the world’s resources that millions of other species suffer. One possible response to these injustices is redistribution of wealth amongst humans, and between human and non-human species. (Norm eight fleshes out this idea.)

This norm also implies that the poor (dominated) deserve to have a voice in public decisions, and deserve to have their interests respected. The interests of the rich and powerful should not be allowed to silence those of the poor.

3.8 Inequity must be eliminated not by material growth but by better distribution and redistribution of wealth, so that people can fulfil their different life responsibilities without harming the environment.

Equity may be defined as providing all humans (not to mention non-humans) with what they need to fulfil their different life responsibilities (Marshall 1984, 55). As far as people are concerned, equity does not demand that humans must receive equal amounts of wealth, since people are different. For example, a musician’s ‘fulfilment needs’ differ from
those of an economist, a politician, or an engineer.

But in terms of ‘basic needs’ like food, shelter, adequate healthcare, and clothing, human needs are pretty much the same. Inequities deny people the opportunity to meet even these basic needs, resulting in oppression, poverty, and environmental degradation. Examples of Third World countries sinking deeper into debt, or Canadian farmers struggling to avoid bankruptcy, demonstrate that economic hardship can force people to damage the environment in order to meet basic needs.

One way of responding to inequities is to promote economic growth and hope that increased wealth will find its way, or ‘trickle down’, to the poor (see WCED 1987). The problem with this approach is that creation of more wealth has not historically proven itself to lead to social equity, or environmental health. Postel and Flavin state:

Despite the fivefold rise in world economic output since 1950, 1.2 billion people - more than ever - live in absolute poverty today. More growth of the sort engineered in recent decades will not save the poor; only a new set of priorities can. (Postel and Flavin 1991, 188)

In fact, Third World debt is greater than ever. The Third World owes $1.2 trillion dollars to the industrialized world. To make matters worse, $50 billion (net) is being transferred from the poor to the rich every year. The poor are destroying their environments to pay their debtors (Durning 1990). We must therefore abandon the dream of poor countries growing themselves out of the debt crisis, in light of evidence that the poor have become poorer in spite of economic growth.

Instead of focusing on creating more wealth, to raise everyone’s standard of living, an alternative focus is better distribution, and redistribution, of wealth. Postel and Flavin (1991, 176) suggest that debt reduction, on the order of sixty percent may be required to reduce
Third World debt to manageable levels. Postel and Flavin note that a number of countries, including the Canada and the United States, have already forgiven $5 billion of loans to African countries. More of this could help reduce inequities.

Another serious problem is landlessness. Postel states:

Unless existing land distribution patterns change, the number of smallholder and landless families in the developing world will grow nearly 30% by the year 2000 - to a total of 220 million households. Without access to secure property, credit, and extension services, these rural people will have no choice but to overuse the land and to farm areas that should not be cultivated. (Postel 1989, 29)

If economic growth is not the solution to the debt problem, then it seems reasonable to conclude that growth will not solve the land crisis either. One simple solution is to find ways to give land back to the landless.

Similar problems exist closer to home, albeit on a smaller scale. Canadian farmers are increasingly going bankrupt and losing their lands. It is now generally recognized that it is almost impossible for the younger generation of Canadian farmers to keep farming. Grain prices are now hovering at 1920 levels (Cleverly 1991, 7), and the future of Canadian farming is in doubt (Redekop 1991, 2). Debt reduction for farmers, and land redistribution, may help counter these problems.

Leviticus 25 describes Christian Sabbath principles, which are consistent with the above recommendations. Sabbath principles stress the importance of periodic remission of debts and repossessing of lands lost (i.e., redistribution of wealth). They are based on the understanding that the poor tend to remain poor, indefinitely, unless steps are taken to rescue them from indebtedness and landlessness. While it is not clear which specific mechanisms should be used to achieve debt reduction, and get land back into the hands of the landless, it
is clear that Christianity recognizes a need for such mechanisms. Christian Sabbath principles therefore offer hope to indebted and landless people (they also offer hope for the environment).

Chapter four will be concerned with determining whether the GP places greater attention on redistribution of wealth, than creation of wealth, in response to social and environmental inequities.

3.9 Government must commit itself to reforming social structures - in the interests of environmental health - to complement changes Canadians make in their personal lives.

Kuhn’s theory of paradigm change suggests that reformation of social structures will follow, once individuals change their values and beliefs. But it is worth emphasizing that governments must commit themselves to changing social structures once they realize that they embody harmful values and beliefs.

For example, government has a responsibility to enter into economics to compensate for some of the weaknesses of the market. Daly and Cobb (1989) have demonstrated that the market has no inherent capacity to limit its own scale, to respect ecological carrying capacity, or to respect the rights of non-human things. Neither does the market respect political boundaries very well, minimize inequities, or place power in the hands of the many. They suggest that faith in the market should be limited to its role of helping to ensure that scarce resources are allocated efficiently. They also suggest that the state should enter into economics to set limits on scale, set minimum environmental standards, ensure that broad based political power can be exerted over economic power in the hands of the few, and tax to meet basic needs and reduce inequities. In other words, the state should make up for some of the limitations of the market. Robert Heilbroner supports this idea:
... the questions that face us in the future are not the purely economic ones of whether corporations will naturally grow larger or whether we will suffer from inflation or ecological damage, but the moral ones of whether we will allow corporations to grow unchecked and whether we will allow inflation or environmental problems to develop unchecked. Government planning, efforts to establish the responsibility of larger enterprise, controlled and monitored growth - these are the tools of the anti-economic, moral impulse. (Heilbroner 1980, 317)

Structural change does not necessarily imply revolution, or violent overthrow of social structures. It does, however, imply turning social structures around, while being sensitive to real constraints of present historical situations. For example:

Sustainable development may force significant restructuring of national economies in the developed nations (for example in the petroleum, automotive, and forestry sectors). This in turn may require new forms of social safety nets to catch and retrain workers displaced from ecologically unsustainable employment. (Rees 1989, 18)

The Christian motivation for changing societal structures is rooted in a desire to establish a just social order which is respectful of neighbour and nature. Christians recognize that the state has the role of administering justice (Rom. 13); therefore, it needs to play a key role in structural change. The state may be considered "the balance wheel in society, balancing out as equitably as possible the conflicts of interest that arise among different institutions" (McCarthy et. al. 1981, 165). For the state to do its job effectively it must allocate sufficient resources to environmental initiatives, remain committed to promises to clean up the environment, and act in a manner consistent with all of the norms mentioned. Only then can the state be considered just, and committed to structural change.

A final test for the GP is whether or not the government truly commits itself to structural change.
3.10 Summary.

Analysis shows that Christianity provides a basis for a number of norms which are consistent with ecological realities, sustainable development, and the findings of a number of scholars. The next chapter will apply the preceding normative principles to the Green Plan, to suggest that Christian norms can be useful to planners evaluating environmental plans.
CHAPTER FOUR

CHRISTIAN NORMS APPLIED TO THE GREEN PLAN

Canada’s Green Plan, introduced on December 11th, 1990, is an important document. It outlines well over 100 goals and initiatives intended to make Canada one of the world’s most environmentally friendly nations by the year 2000.

The plan is divided into two sections. The first section begins with a discussion outlining the urgent need for sustainable development. Canadians are reminded that environmental problems are the most serious problems facing present generations, and that citizens, business and government must work together to overcome these problems. The plan praises the public process leading up to the GP, stating that Canadians from all walks of life were involved in its development. The process is cited as an example of Canadian commitment to the environment.

Section one also outlines some of the philosophy behind the plan. The plan states that Canadians must respect nature, and act cautiously when actions may have negative impacts on nature. Canadians are told that everyone is responsible for the environment, and that better environmental information is needed, along with integrated approaches for addressing environmental issues. The section is rounded out with a brief description of the GP’s key goals, a reiteration of the federal government’s commitment to the environment, and a rough breakdown of funds allocated to the key goals. The goals, and funds allocated to them, are as follows (Canada 1990, 23):

Goal 1: Ensuring that Canada has clean air, water, and land ($850 million).
Goal 2: Achieving sustainable use of renewable resources ($350 million).
Goal 3: Protecting Canada’s special spaces and species ($175 million).
Goal 4: Preserving the health of the Arctic ($100 million).
Goal 5: Working towards global environmental security ($575 million).
Goal 6: Ensuring environmentally responsible decision-making ($500 million).
Goal 7: Making federal government operations and policies environmentally friendly ($275 million).
Goal 8: Responding effectively to environmental emergencies ($175 million).

Section two lays out key goals, and initiatives to achieve these goals, in greater detail.

Some notable initiatives include: eliminating the discharge of toxins into the environment; cutting smog emissions by 40%; cutting Canada's waste generation by 50%; completing the national parks system; stabilizing greenhouse gas emissions at 1990 levels; developing alternative fuels and legislation which will promote energy efficiency; beginning annual Canadian state of the environment reports; phasing out ozone-depleting substances; capping national sulphur dioxide emissions; educating Canadians on environmental issues; improving Canada's science and technology; balancing strong environmental laws with market mechanisms; opening planning processes to the public; expanding international efforts to save the environment; and, reviewing the environmental impacts of existing and proposed federal laws, policies, and programs. Indeed, one cannot fail to be impressed by the sheer scope of the plan, the number of goals and initiatives, the number of agencies charged to carry out the work, and the fact that almost 10,000 Canadians participated in its development. It is also impossible to overlook how optimistic the plan is about Canada's ability to solve its environmental problems. From the sketch of a sunny land on the front cover, to the concluding comments, the GP asserts that Canada's environmental future is bright. A careful reading of the GP leads to the conclusion that this is the most significant environmental plan ever produced in Canada.

But the sunny sketch fails to show dark storm clouds gathering on the horizon. Like
any important government document, the GP has drawn sharp criticism from its opponents. It is charged that: the GP was long overdue; participating Canadians were manipulated during the public process; the agenda for the plan was predetermined; the plan was scaled down in the face of a looming recession and mounting business pressure; the funding requirements are unclear and will allow for political pork-barrelling; the plan is simply an effort to keep the struggling Tory party in power; the budgeted $3 billion will inevitably be chopped down; the plan is vague; the plan is hopelessly compromised and reinforces the status quo; and, the plan does not address native justice concerns. These charges have led to cynicism on the part of citizens concerning the government’s commitment to the environment.

The seriousness of these charges, coupled with the fact that billions of dollars will be spent implementing the plan over five years, suggests that it is worthwhile to take a close look at the GP to see whether or not it is hopelessly compromised and a band-aid solution to Canada’s environmental problems. But in terms of the purpose of this paper, the most important reason for evaluating the GP is to see if Christian norms described in chapter three can be useful to planners evaluating environmental plans like the GP.

It is appropriate to apply a set of norms to the GP simply because the GP claims to address environmental problems comprehensively. Robert de Cotret states in a preface to the GP:

The resulting Green Plan is the most important environmental action plan ever produced in Canada. It is the source for more than 100 important and well-funded initiatives over the next five years. It is a comprehensive plan that deals with our environment as inter-related and whole. (Canada 1990)

Thus, it is reasonable to expect that if this environmental plan is comprehensive it will make normative claims about what Canadians should do respecting environmental problems. And if
the **GP** is the most important environmental plan Canada has ever produced then these normative claims deserve attention.

4.1 **Economic growth must not continue indefinitely on a global scale.**

The **GP** makes contradictory, and confusing, statements regarding this norm. The **GP** states, on one hand:

> For the health of the environment and economy, we must use environmental resources efficiently. All are limited in some way. We must value them at their true worth and use them frugally, so that we live off the interest without depleting the capital. (Canada 1990, 16)

The second, and the latter part of the third sentence are particularly interesting. They convey the idea that nature is finite, and that humans must live within the finite limits of net primary production.

**GP** goals and initiatives to maintain biodiversity, promote soil conservation, ensure fish habitat is maintained, develop alternative energies, implement environmental auditing procedures, and ensure that environmental factors are built into economic decisions support the idea that the earth is finite as well. Therefore it is possible to conclude that the **GP** supports a thermodynamic perspective on nature, like the one described in chapter three.

On the other hand, the **GP** does not conclude that material economic growth is inconsistent with environmental health. Instead the **GP** states:

> We Canadians know that economic growth is essential if we are to enjoy the services to which we have become accustomed. (Canada 1990, 4)

> A threat to either [the environment and economy] will imperil the way of life to which we have become accustomed. (Canada 1990, 15)

> The great challenge of the 21st century will be to accommodate the economic hopes of the majority of the world’s growing population within the limits imposed by the planet. The challenge can be met. But it will require a
fundamental change in the way we use the environment in our pursuit of economic growth. (Canada 1990, 5)

The **GP** refers to the Brundtland report to support the assumption that economic growth is needed to ensure environmental health, but no suitable analysis is offered to justify this claim (Canada 1990, 4, 5).

These last statements show that the **GP** really supports the status quo (i.e., material economic growth). For example, Canada ranks second in the world in per capita carbon emissions (at four times the world average) (Flavin 1990, 19). And between the years of 1980 and 1985 per capita municipal waste generation in Canada increased 21 percent. This increase was the third highest of 14 OECD countries surveyed, and seven times higher than the United States, over the same time period (Young 1991, 43). By condoning present Canadian lifestyles the **GP** supports wasteful lifestyles which are responsible for Canada’s environmental problems and some of the highest consumption rates of material and energy resources in the world. To make matters worse, the **GP** maintains its commitment to economic growth, even though it recognizes that growth has led to increased pollution levels in Canada (Canada 1990, 100). This commitment to growth is one reason why Canadian environmentalist David Suzuki labelled the **GP** a "massive disappointment" (1990, J6).

The **GP** clearly suffers from internal contradictions. It recommends material growth, as well as ‘living off the interest’. More importantly, the norm which emerges most clearly from the **GP**’s pages (i.e., maintaining economic growth) is not consistent with ecological realities, or Christian beliefs and norms discussed in chapters two and three. Christianity is opposed to greed and materialism which harms the environment and is endorsed by the **GP** in the name of preserving ‘accustomed lifestyles’. Instead of concentrating on using the
environment more efficiently to serve unrealistic and insatiable desires, Christians believe that humans should strive to reorient desires that harm their human and non-human neighbours. This does not mean that growth should not take place in the poorest nations of the world to help close the widening gap between the rich and the poor. But it does mean that the poorest nations should not strive to pattern their lifestyles after those of the rich. It also suggests that rich nations should accept lower material standards of living which benefit their neighbours. Unfortunately, the GP does not admit this. Instead, it suggests that both the rich and poor should pursue greater material wealth.

4.2 Plans must emphasize a definition of stewardship which balances human rights with human obligations to the environment.

On one hand, the GP states:

As a signatory to the United Nations World Charter for Nature, Canada recognizes the inherent right of all species to exist. (Canada 1990, 10; emphasis added)

Nature has an intrinsic value that exceeds its worth in the marketplace. It supports a diversity of life on the planet and is essential to our well-being. Respect for nature requires us to accept our responsibility as its stewards. (Canada 1990, 15)

The GP goes on to say that the intent of the National Wildlife Policy, "is to maintain and enhance the health and diversity of Canada’s wildlife for its own sake and for the benefit of current and future Canadians" (Canada 1990, 83; emphasis added). These statements support the idea that humans have direct responsibilities towards the environment.

On the other hand, the GP states:

Canada’s goal is nation-wide reduction of the concentration of ground level ozone... We will reduce ozone concentration to levels below the threshold at which the most susceptible segments of our population experience health effects from smog. (Canada 1990, 51)
This is a minimal goal (one which is focused on the short-term). To be more consistent with ‘respect for nature’, the long-term goal should be to reduce ozone levels so that the most susceptible segments of the ecosphere do not experience adverse health effects from smog. Afterall, as a growing number of environmental philosophers are asking, on what rational basis should human susceptibility to smog be considered the guide to setting allowable smog levels? Why is human susceptibility more important than ecologic susceptibility?

Unfortunately, the GP does not address these important questions, and seems to contradict itself. Other possible contradictions are also worth noting.

Consider the contradictions that can be found in the following statements:

Respect for nature requires us to accept our responsibility as its stewards. We do not own the environment. It is a trust we must protect for the benefit of current and future generations. (Canada 1990, 15)

Governments are trustees of the environment on behalf of the people. (Canada 1990, 17)

The statement that humans do not own the environment is consistent with either an ecocentric or theocentric view, but not an anthropocentric view. However, ‘trustees of the environment on behalf of the people’ does not appear to be consistent with ecocentrism or theocentrism. Ecocentrism says that humans are trustees of nature on behalf of nature. Theocentrism says that humans are trustees of nature on behalf of God. ‘Protecting the environment for future generations’ implies an anthropocentric view as well (assuming that they are future human generations). The conclusion is that the meanings of these statements are ambiguous, if not contradictory.

Because of these ambiguities and contradictions it is impossible to be sure whether or not the GP balances human rights with human obligations to nature. But it would appear that
this balance is missing. This is a serious problem according to the Christian belief that humans are obligated to nature, and to maintaining its integrity. The GP should, therefore, do a better job defining a key idea like stewardship, and eliminate the confusion about whether humans are obligated to nature.

4.3 Humans must be held legally and financially accountable for damaging nature.

The GP fares better against this norm. It states:

To encourage efficient use of resources, we must adopt the rule that the polluter or user pays. Whoever causes environmental degradation or resource depletion should bear the full cost. (Canada 1990, 16)

The GP advocates a number of approaches to fulfilling this norm. One approach will rely heavily on the Canadian Environmental Protection Act (CEPA), to determine appropriate fines and penalties to be applied to polluters (Canada 1990, 153, 154). For example, CFCs will be regulated by 1992, to help phase out CFCs by 1997.

A second approach will use the market to punish polluters. The GP states that:

A wide variety of economic instruments are available to pursue sustainable development and environmental protection goals. They include subsidies that encourage particular forms of environmental behaviour; charges that incorporate the environmental costs of production and consumption decisions into prices (e.g., product and effluent taxes); tradeable emission permits; deposit/refund systems for the control of waste products; and appropriate pricing of natural resources. (Canada 1990, 157)

Unfortunately, the GP does not go as far as it might in the area of market mechanisms. It does not specifically support carbon taxes (or taxes on ozone-depleting substances), as originally expected. Instead, it commits itself only to studying them further (Canada 1990, 109). Doern (1991, 6) suggests that the Department of Environment (DOE) succumbed to business pressure concerning carbon taxes. This has disappointed many
environmentalists, because of the potential seriousness of global warming, and worldwide suggestions that a carbon tax is needed (Murray 1991, 493). Nevertheless, the GP does support the polluter pays principle (which can be derived from the Christian idea of covenant) and it should be applauded for this.

4.4 Limitations of the market, technologies, and human abilities must be recognized, because failing to do so contributes to environmental problems.

The GP begins by asking some good questions:

In the midst of the affluence we have created comes a worrisome concern: is it possible that we who are history’s most affluent and technologically sophisticated society will not be able to maintain what we have for ourselves and our children? Have we reached the limit of the earth’s ability to accommodate our aspirations?

Or can we build on our experience, harness our increasing environmental knowledge, and put our talents, ingenuity and technology to work to achieve continued economic development while simultaneously improving and protecting the quality of the environment on which we all ultimately depend for survival and prosperity? (Canada 1990, 3)

Unfortunately, the GP’s answers are disappointing. To see why it is necessary to show how the GP fails to recognize key limitations of the market, technology, and human abilities.

The first bad assumption, of course, is that material growth can and must continue in the interests of environmental health. The dangers of this assumption have already been described, so no further comments are needed.

Second, as far as self-interest is concerned, the GP admits that Canadians can only solve their environmental problems if they work together. But the GP seems to be much too focused on what human self-interest can do for the environment (see section 4.2).

Third, the GP does, however, admit that pricing natural resources, and implementing market mechanisms can be very difficult (Canada 1990, 157). So it does recognize at least
one significant limitation of the market.

Fourth, the GP is noticeably silent on problems caused by global trade. This is unfortunate, because of the magnitude of international environmental problems, and the vast amount of wealth being transferred from poor to rich nations. It is all the more unfortunate given that the GP admits that environmental problems are global in scope, and that international cooperation is needed if these problems are to be overcome.

Fifth, the GP places a great deal of faith in modern science, technology, and human abilities to solve problems, without paying much attention to the origins and damaging consequences of this faith. For example, though the GP realizes that environmental problems are becoming more complex and widespread it states:

Canadians can and will secure for themselves and future generations a healthy environment and a prosperous economy. (Canada 1990, 6)

Canadians have chosen the path of optimism and challenge, rather than defeatism. The Green Plan moves Canada well beyond defining problems. It enables us to act comprehensively to solve them. (Canada 1990, 6)

Scientific information has been the single most important force in shaping the environmental agenda.... This trend suggests that the science and technology needed for the 21st century will require a significant increase in support at both the national and international levels. (Canada 1990, 147)

These statements confirm Ehrenfeld's claim that: "It is a tenet of contemporary belief that technology, organization, and planning can be integrated and controlled in a way that will let us shape a desirable future" (Ehrenfeld 1981, 236). But chapter three showed that it is dangerous to subscribe to this tenet because human abilities, technologies, and the market, have not delivered on their promises. Ehrenfeld supports this conclusion when he says that it is "fair to judge a process by its results" (Ehrenfeld 1981, 125). Specifically, it is fair to
assess the worth of the assumptions upon which a process is based, by the results of the process. Since human actions have had negative impacts on the environment (especially since humans began to believe strongly in the market, technology, and their own abilities) it is reasonable to question the worth of the assumptions contained in the above statements. By believing too strongly in human inventions and capabilities, humans have tended to try and manage projects that are too large, complicated and risky. They have also become blind to the limitations of the systems they set in motion.

Given the GP's optimism about the market, technology, and human abilities, it is not surprising that it does not express many reservations about them. It seems quite possible that the GP's optimism is rooted in Enlightenment beliefs that objectify nature and tend to aggravate environmental problems. Unfortunately, objectifying nature, and ignoring the problems mentioned above, is what Christians call idolatry. And idolatry ensures that the GP will likely never do better than treat some of the major symptoms of environmental problems, while failing to see and cure underlying problems.

4.5 Humans must think deeply about values and beliefs which have led to the present environmental problem, and avoid focusing on factual data only.

There are a number of interesting contradictions within the GP. First, the GP states that Canadians should change their values, consumption habits, career activities, and lifestyles to help nature (Canada 1990 5, 137, 145):

Changing individual action is the key to environmental change overall. While an individual Canadian's contribution to environmental degradation is small, the cumulative result of 25 million individual actions can be huge. By the same token, changes in attitudes and behaviour that yield small environmental improvements individually can have monumental significance when they are multiplied 25 million times. (Canada 1990, 137)
Yet the GP contradicts this statement when it suggests that Canadians should not sacrifice
their present (materially consumptive) lifestyles (Canada 1990 4, 15; see also section 4.1).

Second, the GP supports material growth. But this does not agree with the statement
that humans do not understand nature very well, and must act slowly and carefully where
environmental risks are high (Canada 1990 15, 44, 98, 102). Economic growth adds to
ecologic stresses; therefore, supporting more growth does not seem very cautious. Indeed,
even if economic growth can be given a different qualitative orientation this should be
demonstrated practically, on a small scale, before claiming that economic growth should
continue.

Third, the claim that indicators like Gross National Product (GNP) have served
Canadian economists well (Canada 1990, 142), contradicts statements about the wrongfulness
of environmental waste. GNP includes activities that contribute to the economy of Canada,
whether they cause harm to the environment, or not. Canada has had real growth in GNP at
the expense of the environment. So it is inconsistent for the GP to praise GNP indicators,
and condemn pollution. Postel and Flavin agree:

GNP becomes an obsolete measure of progress in a society striving to meet
people’s needs as efficiently as possible and with the least damage to the
environment. What counts is not growth in output, but the quality of the
service rendered. (Postel and Flavin 1991, 187)

Fourth, there is the contradiction between anthropocentrism and the main purpose of
the GP: keeping the environment healthy. Human-centred philosophies have not historically
demonstrated themselves to be good foundations to build upon, but it appears that is the
foundation the GP is building upon.

Fifth, and more importantly, the GP stresses that people must change their values
about the environment (Canada 1990, 5, 145), but says very little about what values are appropriate. Instead, the GP states: "Scientific information has been the single most important force in shaping the environmental agenda" (Canada 1990, 147). The GP pays too much attention to information, at the expense of values and beliefs. It fails to adequately recognize that values and beliefs are key to shaping the environmental agenda since any information is assessed according to them. It fails to see that information about environmental problems will fall on deaf ears if Canadians do not value the environment and believe that it is worthy of respect. The GP also fails to give adequate attention to fact that ignorance is the norm when dealing with environmental problems (see section 3.5). These failures may have to do with the planning tendency to be concerned with 'the facts' (see chapter one).

Two conclusions are evident. One, the GP does not appear to understand its own values and beliefs very well, because of a number of contradictions found within it. Two, the GP does not give values and beliefs, and ignorance about ecosystems, the attention they deserve; instead, the GP pays too much attention to gathering more information about the environment. In Christian terms these are the marks of idolatry (i.e., blindness and narrowness).

4.6 Individuals must adopt new values and beliefs where old ones are inconsistent with environmental health.

The previous section has already shown that the GP supports personal change. The GP admits that government efforts to make changes will be successful only if the public is willing to support them (Canada 1990, 131). This is good because it is consistent with the Christian idea of repentance; however, it is also clear that the GP tends to contradict itself.
So it is impossible to say conclusively whether or not the GP supports this norm.

4.7 Humans must recognize that: "unless... dominion is used for the benefit of the dominated, it is misused" (Wilkinson 1980, 213, 214).

The GP does admit that humans have made many mistakes with respect to the environment, but it does not seem to pay enough attention to the dominated.

For example, the GP commits itself to providing water and sewer systems to native communities (Canada 1990, 35); however, the Assembly of First Nations has stated that the government should be embarrassed about even mentioning this in the GP. Indian Affairs has statistics which show that only a fraction (fifteen to twenty percent) of natives living on reserves have access to good sewage facilities and water supplies, while almost all other Canadians living off reserves do. Of $350 million slotted for natives in the GP, as much as $250 million will go towards providing basic sewage and water services (McIlroy 1991, A7; Santoro 1990, 9). The remaining fraction will be spent on activities like developing native environmental action plans, and defining environmental risks and hazards; however, this amount ($100 million) is only half the amount that Canada will spend on preparedness for environmental emergencies alone, and it is unclear whether the money will be spent on the right priorities. And if the funds allocated to the GP continue to shrink ($600 million has been cut from the 5 year total already (Ross 1991, A6)) one can expect the $100 million figure to shrink as well. This leads one to question whether the government is doing justice to native environmental concerns.

Perhaps a better example of the GP's lack of concern for the dominated is found in the following statement:
In the Arctic, we must act responsibly for the benefit of northerners, Canadians and the world community; we must reconcile competing cultural and economic interests. The challenge of protecting the environment so that it can continue to support economic growth, while sustaining the people and the diverse resources on which they depend, is shared by all circumpolar nations. (Canada 1990, 92)

Canada’s northern aboriginal people represent one of the last human cultures which truly understands what it means to live in a symbiotic relationship with the environment. Over the last hundred years western civilization has introduced many new pressures on this culture, pressures which are threatening to destroy that symbiotic relationship. It is disappointing that this culture must now be exposed to the bankrupt myth of the benefits of material economic growth and diversification, as presented by the GP. Northern people possess the necessary skills to live in harmony with the environment, yet the GP is intent on having them change. The ‘challenge’ of which the GP speaks seems unnecessary, unwise, unjust, and unworthy of that name. Even the growth oriented WCED admits that economic development is dangerous when it occurs among aboriginal cultures.

Tribal and indigenous peoples will need special attention as the forces of economic development disrupt their traditional life-styles - life-styles that can offer modern societies many lessons... Some are threatened with virtual extinction by insensitive development over which they have no control. Their traditional rights should be recognized and they should be given a decisive voice in formulating policies about resource development in their areas. (WCED 1987, 12)

A final example is provided by a number of Canadians who complained that domination took place during the process leading up to the publication of the GP. These people complained that the process leading up to plan was intended mainly to add legitimacy to the final product, and was not open. For example, Lindsey states that: sessions were held during working hours keeping many ordinary working people from the sessions; not enough
lead-time was given to environmental groups to prepare; the agenda was set before the sessions, without input from the participants; and, "40% of the participants were federal government employees: it was hardly public consultation" (Lindsey 1990, 37). Winnipeg environmentalists argued the following:

We have taken part in a manipulative process that was neither legitimate consultation nor policy development, but an attempt to legitimize and add attractive detail to a pre-determined program.

The pre-determined program is not substantive or action-oriented but intended only to provide government with an environmentally-friendly image, and our participation tends to de-legitimize our potential future opposition. (Dobson 1990, 32; see also Santoro 1990, 9.)

These examples suggest that the GP does not give the dominated the attention Christian doctrine says they should receive. Interests of the dominated are central to a Christian vision of community. The GP, by contrast, appears to treat the interests of the dominated as an afterthought, as opposed to a forethought.

4.8 Inequity must be eliminated not by material growth but by better distribution and redistribution of wealth, so that people can fulfil their different life responsibilities without harming the environment.

Two criticisms are in order. First, the GP clearly emphasizes continued economic growth, instead of better distribution and redistribution of wealth, as a solution to environmental problems. For example, the GP commits the government to assuming some financial responsibility for environmental problems of developing countries, but focuses on the need for technology transfer which will spur economic growth, instead of debt forgiveness and wise lending (Canada 1990, 123, 126). The plan, unfortunately, does not provide any analysis to show how economic growth will eliminate inequities, or occur without causing further damage to nature. This is a significant weakness, given what was said about growth
Second, and closer to home, the GP pays little attention to the plight of Canadian farmers. Farmers are continually forced to sell crops at environmentally and economically unsustainable prices. Indebtedness is increasing, and farmers are increasingly becoming bankrupt and displaced from their land, or they are ruining their land trying to stay afloat. Debt forgiveness, getting lost lands back in the hands of farmers, and realistic pricing of farm produce are surely a priority if Canada is to ensure that there will be future generations of Canadian farmers. But the GP says little to nothing about this. It would be ironic if GP investments in environmentally friendly technology resulted in the development of innovative farm implements, only to find that there were few farmers left in Canada to use them.

According to Christian doctrine and Sabbath principles, humans must make a concerted effort to ensure that wealth is distributed equitably. This stands in contrast to the 'trickle-down' theory that the GP endorses. Therefore it appears that the GP does not pay adequate attention to the plight of the economically dominated.

4.9 Government must commit itself to reforming social structures - in the interests of environmental health - to complement changes Canadians make in their personal lives.

One conclusion is that the GP was written because the government recognizes a need to reform economic, political, and legislative structures for the sake of environmental health. Afterall, the GP appears to be based on the assumption that government must be involved in: setting water quality guidelines and appropriate water prices; setting goals for waste reduction; limiting acid rain and greenhouse gases through energy efficiency projects; implementing better quotas for fishermen; developing tougher environmental regulations; promoting environmental product logos as a means to informing consumers about their
environmental choices; stimulating environmental education programs; and, using market mechanisms to achieve environmental goals. These actions would certainly have significant structural impacts, if they were carried out.

Another conclusion is that the government is not committed to structural change. For example, the government did not nail down the costs for each of its GP initiatives, like Robert De Cotret promised it would do (Geddes and Morton 1990, 4). Instead it provided a poorly detailed list of resources to be allocated to each of the eight major areas of the plan. This lack of detail suggests that green funds could be used by the Tories to grease the wheels of their next election campaign (Geddes 1990, 3; Doern 1991, 7).

Another area where government commitment appears to be lacking is in the area of total resources allocated to the GP. The fact that the GP budget was first reduced from $5 billion to $3 billion, prior to its introduction (White 1991, 8), and reduced by another $600 million in Michael Wilson's last budget (Ross 1991, A6), suggests that the plan will not have staying power. Ironically, Doern (1991, 7) suggests that although the national debt provides an incentive for scaling down the plan, the upcoming national election, and the need for political slush funds, may limit this scale-down.

Yet another problem with the government's commitment is found in the language used in the plan.

Paragraph after paragraph speaks to good intentions: to assess, monitor, gather, organize, analyze, assess, study, develop, accelerate, propose, negotiate, sponsor, work with, pursue, strengthen, improve, extend, support, enhance, harmonize, participate, review (all verbs taken from the recommendations). These sort of fuzzy declarations of good intentions outnumber the more specific commitments: to establish, begin, implement, increase. (Simpson 1990, A12)
Combined with all the problems and contradictions previously mentioned, the likely explanation is that the government is not as committed to structural change as it would like Canadians to believe. If so, then it would appear that the GP may be little more than a tool intended to give government an environmentally friendly image. This, of course, would mean that the government is opposed to the Christian task of government, namely reforming social structures and pursuing social justice.

4.10 Summary.

It turns out that the GP fares well against only two of the above norms. While it advocates punishing polluters, and recognizes that personal change is critical to achieving structural change, the plan fails seven important normative tests, because it contains a number of contradictions and also appears ambiguous at times.

One possible explanation for these problems is that too many different ideas are incorporated in the GP. Minister De Cotret claims that 80% of the recommendations made during the national wrap-up session were included in the plan (Canada 1990). This is probably mentioned to help Canadians perceive that the process leading up to the plan was open. Unfortunately, including so many different recommendations in the GP appears to have compromised it with ideas which contradict one another.

Another explanation for these problems is that the GP is only a first generation environmental plan. Toner (1991) suggests that the Canadian government has adopted an incremental approach to solving environmental problems, instead of supporting 'radical' change. Therefore the GP should be recognized for what it is - a living document that will gradually change over time to better reflect ecological realities. Toner concludes: "Only time
will tell whether the Canadian Green Plan is of any consequence; that is, whether it can mature into a paradigm-shifting mega-policy that will help shape the behaviour of Canadians for years to come" (Toner 1991, 33).

Unfortunately, environmental problems are already serious, and demand an immediate response. Incremental change may be helpful, but too late to be of consequence. More importantly, even if incremental change is the right approach, there is no reason for the GP to continue to promote outdated norms and beliefs, while claiming that it offers a comprehensive solution to environmental problems. Indeed, the GP should completely abandon destructive norms and beliefs and adopt new ones, even if changes implied by new ones are to be carried out gradually.

Those who are sceptical about this kind of normative critique should contrast this approach with other approaches used to comment on the GP. Coopers and Lybrand (1991), for example, have determined that one of the most important issues surrounding the GP has to do with what the impacts of the plan will be on business. They therefore outline GP impacts on business in some detail, and ignore the problem of whether or not the GP is rooted in principles and beliefs that are antithetical to environmental health. Doern (1991), of the C.D. Howe Institute, advocates a broader analysis of the GP, but he makes a mistake similar to the one made by Coopers and Lybrand. There is obviously nothing wrong with assessing the GP in a variety of ways. What is wrong is missing the point that the most serious issue surrounding the GP is whether or not it is based on flawed beliefs and norms. Unfortunately, both Coopers and Lybrand and Doern miss this point. They also fail to point out a number of glaring contradictions contained in the plan. The conclusion is that it is imperative to
advocate normative evaluative approaches, like the one described in this paper, in addition to other approaches to evaluating plans.

The bottom line is that the GP deserves a passing grade for only two of the nine norms mentioned. Normative analysis shows that the government does not clearly understand which beliefs and norms are responsible for ecological destruction because the GP recommends beliefs and norms which are incompatible with sustainable development. The importance of the above norms will receive greater attention in the next chapter.
CHAPTER FIVE

CONCLUSION

The first objective of this thesis was to show that, contrary to popular belief, Christian beliefs do not condone damaging nature. This objective was satisfied through the analysis of chapter two which showed that Christians are commanded by God to care for nature. Critics are correct to blame Christians for not living according to their own beliefs; but, they are incorrect to criticize the Christian faith because of incorrect behaviours of Christians.

The second objective was to show that Christian norms are consistent with ecological realities and are useful for planning for sustainable development. Nine norms were developed in chapter three and shown to be consistent with ecological realities, Christian beliefs, and the findings of a number of scholars. Application of these norms shows them to be very useful for evaluating environmental plans. For example, the norms helped identify a number of serious flaws and contradictions contained in Canada's Green Plan, which must be resolved if sustainable development is to be achieved. The conclusion is that Christianity provides a basis for norms which serve as useful criteria for guiding sustainable development. Thus, the second objective of this paper was satisfied.

These findings have broader implications for future planning research. They suggest that future research should pay greater attention to the relationship between worldview beliefs and norms, sustainable development, and environmental planning. Many possibilities for research exist.

One possibility is for planning students to work through their own worldviews, and see what the implications are for planning and sustainable development. A second possibility is
to select a few worldviews and do a comparative assessment of how well each supports sustainable development. This would be an ambitious exercise, more suitable to research on a doctoral level. A third possibility would be to expand on the normative framework contained in this paper, to allow for a more comprehensive normative evaluation of planning documents. Finally, one could apply a similar sort of analysis to future revisions of the GP, to see whether it is progressing towards an environmentally sustainable worldview.

Of course, evaluating worldviews is a difficult task. But if planning is more than just a technical enterprise, and if sustainable development is morally important, then it seems that planners must stretch beyond traditional boundaries of knowledge and practice, and grapple with all the doubts and uncertainties which shroud their most cherished, and influential, beliefs and norms. Some might say that this task is better left to educated philosophers. But, rightly or wrongly, everybody makes decisions about their own, and other, worldviews. It is an inescapable fact of life. So everyone should be encouraged to think carefully about their norms and beliefs. Others might say that this is a presumptuous task. But so is trying to make the world a better place to live in. The alternative is too disturbing to consider.
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APPENDIX

DEFINITIONS

ANTHROPOCENTRIC: "Literally, centering in man. A term which may be used in conjunction with extreme humanism, viewing the world only in terms of human experience" (Runes 1984, 28).

BELIEFS: Beliefs are fundamental assumptions about the world, God, humanity, the purpose of life, and so on. They may be well supported by facts, or they may not; however, they are not normally subject to rational 'proof' (see Runes 1984, 52).

MORAL STANDING: As indicated in chapter two, moral standing is a quality which an object possesses, independent of other objects. Moral agents (i.e., humans) have direct moral obligations to objects which have moral standing (see VanDeVeer and Pierce 1986).

NORMS: Norms are standards of right and wrong. They are also rules for 'right action' (Runes 1984, 228). Planning norms are principles used to assess the worth of plans and planning activities, and identify planning priorities (see Forester 1989). Planning norms set standards for acceptable professional behaviour. They tell planners what they should do, and what their plans should look like. Norms can also be beliefs; however, there are many beliefs which do not have normative implications.

SUSTAINABLE DEVELOPMENT: The following definition is a variation on the one proposed by the World Commission on Environment and Development (WCED) (1987, 43):

Sustainable development is development that meets present needs of humanity and nature, without compromising the ability of future generations to meet their own needs, and the needs of nature.

WORLDVIEW: "Worldviews are perceptual frameworks. They are ways of seeing" (Walsh and Middleton 1984, 17). A person’s worldview determines how they interpret reality, and how they act. Similarly, beliefs and norms determine how a person interprets reality, and how they act; therefore, beliefs and norms, and worldviews are closely related. One can say that worldviews are largely (if not completely) made up of beliefs and norms. Specific beliefs and norms are components of a particular worldview.