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CREATIVITY AND RESPONSIBILITY
IN
ENVIRONMENTAL TRANSFORMATION

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INTRODUCTION

God created man in His own image with the gift of creativity to use in managing wisely his environment and to derive satisfaction from the work of creativity. In Eccl. 3:12-13 (NIV) Solomon says:

I know that there is nothing better for men than to be happy and to do good while they live. That everyone may eat and drink and find satisfaction in all his toil - this is the gift of God.

God endowed man with the power of creativity as a means of achieving his personal growth and developing his environmental resources. This was to be the delight of his life.

The purpose of this paper is to show that a christian has a God given obligation to improve and beautify his environment. Learning should enable him to take the challenges of this responsibility more seriously and act in harmony with his calling. Irresponsible human creativity has caused horrendous damage to the environment.

MAN A STEWARD OF GOD'S RESOURCES

When God created man He gave him the responsibility of taking care of the environment. He commissioned him to rule and subdue the earth and all that is in it. After establishing the beautiful garden of Eden, God asked Adam to work and take care of it. (Gen. 1:28; 2:15). He gave him the mandate to develop his environment and his culture. Holmes (3:19) makes the same point as follows:

At creation God made us in his own image, to steward our own and nature's resources creatively and wisely.

It is important to note that wise management was to be the key of man's stewardship. His environmental activities were to be characterized by loving care reflecting the God of Love. His double responsibility of masterhood and servanthood was always to be unified in every activity. His role of master in developing the nature's resources was to be guided by his role as a good and faithful servant in providing loving care to God's creation.

Before the fall man's relation with nature was perfect. Schuurman (6:26) describes the relationship to have been of complete harmony. Man used nature with the concept of preservation rather than that of exploitation. Nature in turn provided adequately his needs. The serving motif was the principle guiding all operations of man and nature.

However, after the fall of man tension and conflict permeated God's creation on earth and damaged the love relationships in it. Hostility, struggle and limitations were the natural consequences of the entrance of sin into the human sphere. Schuurman (6:27) rightly states:

The harmonious relationship between man and nature changed drastically, however, by man's fall in which he rejected God and wished to be a god of himself. From that moment on threatened by his natural environment, all the more intensely as his apostasy continued.

It is this step of man making a god of himself that has led to his abuse and misuse of the environment. His caring attitude gave way to exploitation attitude because of the selfish nature introduced in him as a result of the fall into sin. However, sin did not obliterate completely the caring attitude from the heart of man. We often witness both the elements of preservation and destruction in man's environmental activities. As Wright (8:161) says, we see the evidence of both good and poor stewardship in assessing humankind's rule over the earth.

EVIDENCES OF GOOD STEWARDSHIP

Man has tries various ways and means to improve and protect his environment.

1. Land Reforms

Man, alarmed by the depletion of his environment, has from time to time intervened with the activities of conservation and reclamation. Here in Kenya for example, the Presidential Conservation Commission was created to encourage people to engage in the activities of land conservation such as planting trees on steep areas and waste lands. Through these efforts forests have been created to preserve land where it was wasting away. Techniques for the control of soil erosion are employed on places that are vulnerable to high rate of soil erosion.

Kenya is not alone in the activities of conserving soil. Many countries in the world over have awakened to the need of land use with proper methods of conservation. Benton (1:416) citing Japan as example indicates that its land can support seven people per acre even though the place is rough and mountainous through the careful methods of farming the Japanese are using.

The digging of wells in arid and semi-arid areas using modern machines of human technology has transformed farming and life activities in general in these places. Communities staying in these areas have been helped to move towards self-sufficiency in food, and even supplying a surplus, through irrigation schemes. The creation of flower gardens and shade-trees in strategic centres have helped to provide places for recreation and relaxation for many people who have little alternatives.

2. Creation of Wildlife Sanctuaries

The creation of animal sanctuaries by many governments, and the enactment of regulations by the same against poaching have greatly helped save many animal species from extinction. Similar regulations that protect natural forests have preserved animal habitats. The African Rhino for example is threatened with extinction by greedy poachers who want to make quick money from its horns. The efforts put by the concerned governments and organisations have gone a long way to ensure its continued existence.

Nature needs man's care, and it is our responsibility to provide it, and more so when we have the awareness that it is a God -given responsibility and we are accountable to Him.

3. Control of Pest Species and Food Production

The entrance of sin to our world caused nature to affect man negatively. Many organisms became causers or transmitters of his diseases and those of his crops and domestic animals. From the time of the fall man has been in constant struggle against hostile environmental factors to ensure his survival, and the battle against pests has been one of the greatest. Brady (2:551) remarks:

The history of man is replete with stories of his battle with pests. More than 10,000 species of insects, 600 weed species, 1,500 plant diseases, and 1,500 species of nematodes are known to be injurious at least to some degree to man, plants and animals. Various methods have been used to tip the scales of nature in man's favor. Crop varieties and breeds of animals have been developed which resist pests. Tillage implements are used to control unwanted plants or weeds. And man has learned to rotate his crops to prevent the building of pest organisms which are dependent upon a single crop species.

The genetic engineering has helped man to develop animal and crop varieties that are suitable to specific environment. This has greatly improved crop yield to meet the growing demands of the increasing population. For example the hybrid maize varieties which have been developed have tremendously helped Kenya to become self-supporting with much surplus in maize production.

The use of herbicides in controlling weeds has made large scale farming much easier and efficient. Human labour is becoming less and less available and man has to turn to technology to sustain his farming activities. Man has achieved commendable progress in controlling organisms that have been a constant threat to his crops, animals and himself. This has resulted into more food and increased life expectancy. Many diseases that endangered life have been effectively arrested.

EVIDENCE OF POOR STEWARDSHIP

Life on earth is threatened by unwise and irresponsible management of natural resources. Everywhere we are surrounded by the activities of environmental destruction.

1. Destruction of Vegetation and Animals

Many species of animals have gone to extinction because of the killing by man for their meat, skins and/or tusks which he has used in various ways ranging from food and clothing to ornaments. Some species have been eliminated by their predators because man exposed them to the predators by destroying their habitats.

The earth has been denuded of millions of acres of its natural forests through careless cutting and burning of vegetations. Forests have been recklessly destroyed for timber, posts, provision of heat energy and farming activities, a process that has brought to an end many precious plants. Many places have been turned into waste lands and deserts through these thoughtless activities of man.

The practice of overgrazing has often left the soil bare and loose, making it vulnerable to the agents of soil erosion. Poor method of cultivation have led to the loss of millions of tons of valuable top soil through the process of erosion. These irresponsible activities of man have created an unbalanced world-ecosystem whose outcome is an unstable environment, difficult to adjust to. As Schaeffer (7:87) observes, man, instead of carrying out his divinely assigned duty of replenishing the earth is ruining it.

Men who know, men who have been studying and doing research are becoming alarmed about the destruction of the original balance between soil, plants, animals, air; water, plants, insects, fish and air; showing so clearly that man-the human race-rather than interacting with and carefully caring for the things God created to be in relationship with him, to give him environment and atmosphere, and opportunity not only for staying alive but also enjoying fulfilment of all his talents and sensitivities-has in fact done the very opposite and has very effectively been ruining his own domain. To look at it honestly and frankly, what man has

been doing has been tearing to shreds not only his 'home' but his food, his air, his beauty, and subsequently his own psychological makeup, in effect-himself. It is creativity and artistic production in reverse. Man the artist, upside down!

2. Environmental Pollution

Environmental pollution is a great threat in the world today.

Governments, organizations and individuals all over are sounding a serious concern on the dangerous level of pollution man's environment has gathered. One of the most recent of these concerns has been the possible destruction of the ozone layer which protects life on earth from the exposure to dangerous radiation from the sun than can greatly damage life. A related feared danger in this respect is a global increase of temperature which is likely to affect life negatively here on earth. The entire human environment is contaminated with health hazard pollutants that result from human activities.

The human activities that are causers of pollution include farming, burning of fuel and creation of industries. Odum (4:432) observes that as these activities expand so does pollution, which is very unfortunate situation. The use of chemicals in the farming activities such as inorganic fertilizer and nondegradable insecticides have caused tremendous harm to the environment. Some of these chemicals like DDT have been the great causers of the death of numerous fish, birds and other desirable organisms.

A number of these non-degradable chemicals find their way into the food chain, and once they have entered into energy cycle it is difficult to eliminate them. The unfortunate thing is that they accumulate as they move to higher level of the food chain. Fumes from automobile exhausts and factory chimneys are major air pollutants. These pollutants are of great health hazard to human life, animals and plants. Benton (1:469) and Odum (4:445) implicate them as causers of respiratory diseases including lung cancer. Some of these impurities in the air lead to the formation of acid rain which as Wright (8:161) indicates, is destroying lakes and forests.

Technology, as much as it has increased material possessions for man and given him false hope of a better quality of life, has damaged his environment with fatal wounds. Schuurman (7:59) argues:

Technology as predatory cultivation everywhere leaves behind itself an ineffaceable trace of destruction. Increasingly, technology renders the earth a dead earth. The devastation is mightiest in the case of radioactivity. Whenever there is a radioactive waste, the earth has been made unfit for human habitation.

The outbursts of nuclear energy such as that occurred at the nuclear station in Russia have claimed many lives and deformed others, even the unborn. Lasting harmful radioactive substances have been left behind on earth negatively affecting man and his environment.

Man's lack of loving care in his activity of unbridled development through the exploitation of natural resources has put life on earth into a critical danger.

MAN'S PREDICAMENT

The unabated materialistic demands of our technological civilization and the increased needs imposed by the population explosion seem to pressure man to exploit the environment without restraint using his advanced technology in order to meet the wants of humanity. Even though there is a mounting awareness of the destructive nature of this approach he moves forward with it. He justifies his course of action by the experienced short-term success. The prime factor that seems to govern his action is increased goods. As Schuurman (6:34) puts it:

The only decisive criteria he accepts are material welfare, avarice, and his compulsion to produce and accomplish.

The approach is responsible for despoiling human environment in creating waste lands, deserts and polluted world. Man is becoming increasingly aware that he is constantly endangering his own life by the uncontrolled activities intended for material progress. As indicated earlier pollutants have claimed many human lives and ruined the health of millions of people.

Habitats of desirable species are destroyed by activities of industrial economy. Here in Kenya for example the flamigoes of Lake Nakuru were once in danger because of the industrial wastes that were destroying the ecosystem of the lake. The situation was saved when the government prohibited the disposal of toxic industrial waste into the lake. The industrialized countries are stranded as to where to dispose highly toxic waste materials of their industries. Recently a ship carrying poisonous industrial wastes in the Indian Ocean frightened many governments and put them alert to ensure that their environment was not the dumping ground for such highly dangerous materials.

In view of this, it is extremely unfortunate that the international community is putting pressure on developing countries to adopt an industrial economy rapidly. Any development which is advocated must be seen to take the idea of environmental preservation into consideration, otherwise we are increasing the danger of global disaster.

It is encouraging that the campaign against environmental pollution and its restoration is gathering momentum. It is also commendable that technology has developed instruments to detect pollutants and their level of pollution. With all these positive steps towards redemption of our environment, the activities of damage still greatly outweigh the activities of correction.

Another dilemma of man is that the natural resources are being used much faster than they are building up. The resources have reached critical limits. Wright (8:161) observes:

We are approaching the limits of the capacity of biological system to produce food and fiber in support of human life and economic activity-in some parts of the world, those limits have been exceeded.

It is of paramount importance that man brings to balance the use and the building up of resources in order to avoid the disaster that is inevitable in the squandering behaviour.

His success in managing the environment depends on his return to the plan outlined for him by God to creatively develop the environment with loving care.

INTERGRATION OF FAITH AND LEARNING
IN THE STUDY OF HUMAN ENVIRONMENTAL
ACTIVITIES IN A CHRISTIAN SCHOOL

A christian school should be a model to the world of fulfilling God's will to man of creative development and preservation of nature. The environmental activities cut across the school curriculum. We see them in History, Biology, Geography, Agriculture, Economics and in almost all other subjects. As students learn of these activities they should critically examine them in the light of God's revealed will in scripture. The Bible tells us that anything we do is to be done to the glory of God. (Co.3:17). We are to reflect God's character in every activity. Man's activities are to be assessed against God's attribute of loving care.

Benton (1:413), for example, gives historical information that the deserts of North Africa were once the breadbaskets of Rome and the desolation of the Near East was once the fertile crescent. The issue that can be raised in the classroom is, what led to the desertification of these places that were once fertile and well supplied with rain? If the destruction was brought about by human activities; what principles were violated. In many cases it is the principle of selfish greed for the accumulation of goods that has prompted man to overuse the environment leading to its destruction. The God of Love calls us to exercise the principles of loving care to nature in order to sustain it.

In a similar way in the study of Ecology students should analyse and find out how man's activities have affected the environment. Here in Kenya for example irresponsible farming close to river banks have caused the rivers that were having plenty of water to dry up. Careless tilling of land and overgrazing have been responsible for serious soil erosion.

Students should be asked to discuss whether preserving nature is a moral obligation. It is our Christian duty to save life, and nature is a God-given method of sustaining life.

In the study of Geography, we witness the transformation of the environment by human activities. These environmental changes may be the cause of change in climate which we often experience. In most cases these climatic changes are not favourable to optimum existence of the prevailing species in the area. Human activities should not be assessed on the basis of economic benefits only but more so on how they protect man's environment for his present and future welfare. The value of economic activities should be assessed in the same way when studying economics. The loving care principle that ensures preservation of God's creation should guide our creativity in developing resources.

In the subject of Agriculture students should be guided to employ farming methods that promote preservation of nature rather than those that destroy it. For example students could be asked to analyse the advantages and disadvantages of different types of fertilizers and manure. Then they would be asked to choose the one which will not despoil the environment and yet bring about good yield.

In the side of population and family life students should be shown our moral responsibility for planning the family size well. The natural resources are finite and they can only support adequately a finite population. Uncontrolled increase of population puts excessive strain on the natural resources. As mentioned earlier in many places of the world the resources have been stretched to their limits.

Population explosion has often been the cause of overuse of the natural resources which subsequently destroy the environment. An issue that can be raised here is; does one need to have a small family if he is economically able to support a large family?

We are to look beyond our own individual ability and see the carrying capacity of the environment for a proper decision. Every individual has a

right to receive equitable support from the existing resources. The welfare of the entire community should guide our line of action. Love considers others.

The school environment should be a major laboratory for teaching responsible stewardship of nature. Students should be involved in creatively beautifying the school campus with well-cared-for flower gardens and trees. The school farm garden should be exemplary in neatness organisation and sound methods of good farming.

Teachers should set a high example in their homes in maintaining their yards and gardens clean with artistic flower gardens. A christian school campus should show that we serve the God of orders, beauty and loving care.

It is also important that students and teachers be involved in community activities that preserve the environment and restore it to order. This will go along way in teaching responsible stewardship to members of the community. The school should participate in activities such as that of preventing soil erosion, cleaning market places and planting trees. The school can also have tree nurseries for supplying the community with a variety of seedlings for planting to preserve and beautify the environment.

CONCLUSION

It is the responsibility of every christian to show loving care for the environment put under his charge. Walsh and Middleton (9:58) state

We should also recognize the crucial element of loving care and preservation in the Biblical mandate to subdue the earth. We are to till and keep the garden. Our culture forming is not to be done selfishly but with real care for the creation. To be faithful to the image of our God, our cultural development of the earth is to be good, wise and loving-like Yahweh's covenantal rule.

As Wright (8:180) points out we are not to stand aside as christians and watch the environment being destroyed. We are to participate redemptively in healing it.

Christian schools should help students to learn to appreciate and preserve nature, and skillfully develop it. Good nature walks and excursion can be planned from time to time with this purpose in mind. As students interact with nature their minds should be drawn to the loving and caring Creator. As they observe how man's activities of selfish greed and ignorance have greatly despoiled the environment they could be led to recognize that it is always best to do things in harmony with God's revealed will for us.

As the school helps students to develop their creative power, it should also effectively guide them to use their creativity in improving , beautifying and preserving the environment to the honour and glory of the Creator.

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