

Control of Pollution in the Environment:

According to scientists and philosophers man is considered as the major factor in disturbing the natural balance of the universe. Man interferes intentionally or unintentionally in the earth's ecosystems by impairing its perfect order and precise sequence. But it seems that man has cut off his nose to spite his face and he now is the victim. Grave dangers are manifested in pollution of the air, water, soil, outer space and others, as well as the irrational exploitation of the environment's resources, and inconsistent distribution of human settlements. All these factors have led to different problems, all of which are marked by a disturbance to the earth's natural balance.

Urban populations are concentrated in towns usually emerging close to one or more natural resources (water, oil, fuel, sea, etc.) which create a marked disturbance in the existing natural balance. This imbalance is mainly attributed to the increasing waste disposal (human or industrial), exploitation of resources and density in population. It must be admitted that man's claims on the environment have overstepped the mark in many cases, creating a disruption to the natural balance of various bio- and eco-systems all over the world. This irresponsible behavior has led to a depletion in the atmosphere and this poses the greatest threat worldwide.

There are countless examples of disturbances to the environment. Forests have been removed, deserts have been encroached upon, and many species of plants and animals have disappeared throughout the world. All these affect the macro- environment because it is an integrated whole.

The climate has changed and is in fact still changing due to unwise human activities. There are, however, natural and non-human induced reasons for the climate changes that should not be ignored, such as the pattern of the earth's rotation around the sun and volcanic explosions. The over-use of wood, excessive removal of pasture land, and deforestation which destroys and eradicates magnitudes of the earth's vegetation all play a role in raising the earth's absorption of the sun. In addition, there is the high use of energy over and above man's need, which raises the temperature of the atmosphere and thus affecting climate.

The over-use of non-renewable resources - oil, coal and natural gas - leads to a continuous increase in carbon dioxide in the atmosphere, which, in turn, raises the temperature.

The ozone layer has been further exposed to destruction as a result of the exhausts of planes flying in the higher altitudes, as well as gases and fumes expelled from nitrogenous fertilizers and atmospheric pollution from factories. The danger of the depletion of the ozone can only be imagined when we realize to what extent the earth will be exposed to more carcinogenic rays. As a result the climate will be altered worldwide, destroying the dense forests, reducing agricultural output and killing most living creatures except for insects which can withstand the ultraviolet rays.

Man's disruption to the natural balance of forests leads to various problems that are reflected on him as well as other creatures on earth. Soil is washed away, humus shrinks, rainwater runs in torrents, temperatures fluctuate, high and severe winds become more common and drought spreads globally.

In addition to toxins expelled into the air and waste pumped into the water by factories, nuclear explosions, radioactive pollution, there is the problem of man-made chemical pesticides used to control pests which are injurious to the agricultural or animal wealth. Pesticides and other toxins interfere with the ecosystems and have destructive consequences that appear in all layers of the atmosphere, water, soil, and outer space. In

attempting to eradicate or control these creatures which compete with man for survival and natural resources, man has designed deadly poison which he breathes in or drinks and eats through crops, meat and dairy produce

The corrupters of the earth, whether those who deny God, practice injustice or go against the universal laws, are referred to by the following Quranic verses.

“There is the type of man whose speech about this world’s life may dazzle thee, and he calls The God (Allah) to witness about what is in his heart: yet is he the most contentious of enemies? When he turns his back, his aim everywhere is to spread mischief through the earth and destroy crops and cattle. But Allah loves not mischief” (Al-Baqarah: verses 204 and 205)

An incidence occurred prior to these verses being revealed. A man named Al-Akhnas Ibn Shuriq came to the Prophet Muhammad (peace be upon him) to embrace Islam, but as he turned to leave, he happened to pass by a pasture and grazing animals. He set it alight and killed the cattle. The verses were sent down as a sign of Divine disapproval.

This incident recurs over history on a wider scale involving millions of people throughout the earth. The natural wealth deposited by Allah for the benefit of mankind has been spoiled. Selfishness and aggression has overcome mankind, as they have become corrupters of earth, the surrounding atmosphere and neighboring outer space. Allah the Almighty says:

“Mischief has appeared on the land and sea, because of (the need) that the hands of man have earned, that (Allah) may give them a taste of some of their deeds: in order that they may turn back (from evil).” (Ar-Rum: verse 41)

Mischief on the land and sea is inflicted by man’s unwary interference with the natural laws and environmental systems that are ultimately against his own interests. Environment pollution, which is tantamount to the disruption of natural balance, is the main form of corruption on earth.

As Allah created man on earth, he decreed that man should preserve this habitat. He gave man the right to invest in it and benefit from it. He enjoined upon man not to cause mischief anywhere. He addresses whoever may think of disturbing the natural balance, the earthly equilibrium, or inflicting injustice.

“Seek not mischief in the land, for Allah loves not those who do mischief.” (Al-Qasas: verse 77)

Islam and its Ummah is moderate, where its people do not consider nature and cosmic objects as deities, but at the same time do not tamper with or spoil them. The relationship between the Muslim and the universe is one of harmonious benefit and use. When Allah takes an oath by some creatures, he draws attention to the fact that man should recognize their value and take care of them.

“By the sun and his splendor. By the moon as it follows him. By the day as it shows up (the sun’s) glory. By the night as it conceals it. By the firmament and its structure. By the earth and its expanse.”(Ash-Shams: verses 1-6)

“By the night as it conceals (the light). By the day as it appears in glory. By the creation of male and female.”(Al-Lail: verses 1-3)

“I call to witness the siting of the stars. And that is indeed a mighty adjuration if you but-knew, That this is indeed a Quran most honorable.”(Al-Waqi`ah: verse 75-77)

With such an adjuration and call for revering other creatures and aspects of His creation, Allah urges man to jettison bashfulness towards them because such an attitude does not yield progress or civilization. Removing

the beauty of these creatures and failing to draw the benefit from them causes man to neither gain in morals nor lead him to progress or civilization.

Controlling Noise Pollution:

Noise leads to environmental, psychological and physical harms. There is evidence that inhabitants of large cities suffer from fatigue and psychosomatic disorders due to constant exposure to noise. Although noise has been considered harmful or at least unpleasant, noise pollution has been regarded as the worst negative effect of the industrial era, and a characteristic of industrially developed societies. Yet, little attention has been given to it, as pollutants of the air or the water have tended to take precedence.

This is due to the following factors: noise is caused by a variety of sources everywhere. It is not easily targeted; the effect of noise disappears as it stops, without leaving a lasting trace on the environment, although continuous exposure to noise leads to certain disorders, as explained below; noise is a domestic or local environmental pollutant. Unlike water and air, its effects do not spread from one country to another.

What is the definition of noise?

According to the Encyclopedia Americana, it is the pressure that harms man and other animals. Sir. A. Wilson Committee of Noise Affairs defines it as the sound that is undesirable to the receiver. A recent definition of noise is that it is a form of environmental pollution that is not less dangerous than the man-made toxins.

Noise is measured by “phon” and “decibel” (dB) - the former being the unit of sound pitch, the latter being the unit of its pressure or impact. At 1000 Hertz, phon = 100dB, at 3500 Hertz: 100 phon=89 dB, and at 50 Hertz: 100 phon= 110db. The decibel is the minimum of the difference between two sounds detectable by the human ear. At zero, the sound is very low. It rises gradually until 130 dB at which degree it becomes painful, Scientists have determined the noise values of some sounds in nature and measured them in dB:

- Natural breathing -10dB;
- Rush of tree leaves in breeze-50 dB;
- Traffic in a crowded street - 70 dB;
- A large water fall- 90 dB;
- A nearby machinegun - 130 dB
- Aircraft taking off-140dB;
- A rocket in lift-off - 175 dB.

Sounds are divided into the following categories: very quiet, quiet, audible, medium, high, and noisy. The last category is painful at 130 dB. There are several sources producing this noise:

-Some natural sources like thunder, storms, clashing waves, dogs barking, wind, waterfalls, avalanches, fires, etc.

-Man-made noise coming from agricultural and industrial equipment, transportation etc, and even household tools, machines and instruments.

In major cities one kind of noise is known as the “ambient or background noise”, which means everything one may hear at home, in the street and at work, created by planes - particularly jets - traffic, street vendors, children playing, radios and other audio sets, washing machines, factory machinery, workshops, live bands, etc.

The dangerous effects of noise

Noise has seriously bad effects on the human ear. But does it have physical, psychological or social effects?

1) The auditory damage:

The level of noise in major cities and urban centers has become so serious that it will be a danger to public health if it continues at the present rate. Although noise has existed around man for millions of years, its medical dangers have only been recognized since 1930, when homes were used in different kinds of vehicles running inside and between cities. One of the earliest studies on the biological effects of noise was that sponsored by US Naval research office under the supervision of the University of Chicago, and published in early December in 1953. It indicated that US marines who worked in noisy conditions suffered from excessive fatigue, occasional nausea, and loss of libido.

Reports filed by research committees in the following decades indicated that more than 20 million people were suffering from noise-induced hearing loss in the US alone, as noise was the most prominent of the environmental pollutants. A study concluded in 1968 by the Federal Council of Science and Technology (specific committee for the environment) warned that about 4.5 million workers might apply for compensation for loss of hearing.

Excessive noise damages thousands of cells in the ear leading to an immediate loss of hearing, which happens in explosions and wars. Constant exposure to noise may lead to a gradual damage of the cells and a gradual loss of hearing. Deafness may even result from a bullet fired or an explosion. In the former case, deafness results from auditory waves, whereas in the second it results from pressure waves. The pathological disorders in that case involve the outer ear, as the drum congests and may be pierced due to mechanical changes. It also involves the middle ear, as the parts may be torn and loose, then bleed and an aqueous fluid can subsequently appear in it.

Deafness means a weakening in the hearing. It may be temporary, partial or complete. The human ear can endure sounds safely up to 60 dB, but may be injured by more intensive sounds that affect it constantly or temporarily. Deafness happens at the following stages:

1. Weakness in hearing for a short period that may disappear after some minutes or hours (with occasional loud noises in factories, workshops or crowded places).
2. Constant weakness, due to which one fails to hear a quiet talking (usually resulting from continuous daily exposure to high noise).
3. Complete permanent deafness (resulting from a continuous daily exposure to very high noise like explosions and bombs).

Records on workers in Sweden indicate that many are exposed to loud machinery noise daily. About 5000 people suffered hearing loss in 1973 and the figure rose to 16,000 in 1977. An official report of the Environment Affairs Council in US issued in 1970 indicated that about 16 million industrial workers faced the risk of losing their jobs due to the weakness in their hearing abilities.

2) Non-Auditory Damage:

The Fetus: The fetus floats on fluids that protect it from jerking movements, but barely from noise. It can hear internal sounds (the mother's heart beat, the movement of the intestines, and the air in her lungs) as well as external sounds (the mother's voice and any surrounding sounds or voices). Studies indicate that the fetus experiences muscular spasms if the mother is exposed to excessive noise. It develops a response similar to the post-delivery - "Motor reflex action". The heartbeat of the fetus, after its sixth month, accelerates if the mother is exposed to extreme noise. Research conducted on animal fetuses, when human cases are difficult to study, reveal bone deformities in the fetuses whose mothers were exposed to noise that led to a hormone imbalance.

The Nervous System, the Circulatory System and the Endocrine Glands:

Extreme noise affects the nervous system, and creates electric pulses that travel through the nerve fibers to the brain cortex, the highest functional region in the brain. The cells of the cortex are stimulated to identify incoming noise. Sub-cortex regions are also affected, particularly the reticular formation (a lump of cells at the base of the brain) which is directly related to the higher layers of the brain up to the meninges, as well as the spinal cord. Consequently, the autonomic nervous system, particularly the sympathetic system is stimulated. The latter controls the circulatory system (the heart and the blood vessels), the function of the endocrine glands and the digestive system - particularly the stomach. Disorders of varied intensity occur according to the intensity and duration of the noise, and are reflected in several physical disorders.

Medical studies also indicate that noise leads to higher rates of cholesterol and tri-glyceride in the blood, which blocks the blood vessels and leads to heart attacks and heart failure. Excessive production of the corticosteroid hormones is related to heart attacks, and is caused by the effect of noise on the adrenal gland.

3) Psychological and Social Damage:

Man - and animals - behaves properly when in a stable, normal mental state, according to the observations of psycho-sociologist Charles Kort and some of his colleagues. The study showed 2567 cases of people who live in noisy areas and heavy traffic in Holland. Psychological studies on industrial workers indicate that those who are subject to high-density noise suffer from irritability, dizziness, headaches, moodiness and anxiety.

Children are naturally more affected by noise than adults. The mental capacities of school pupils are influenced by the surrounding noise, for example near airports where they feel distracted and frustrated. Children under 7 are the most sensitive to noise, as they become annoyed and often cry if they hear a sudden loud sound.

Soft music calms the nerves, whereas the loud music and jerky movements performed by young people in nightclubs leads to severe tension due to the effect of amplifiers, not to mention the auditory harms indicated earlier.

Calmness relaxes the nerves, noise irritates them: Concentration and deep contemplation need a calm atmosphere to allow the person to be creative. The noise from a wedding down the street to me has compelled me to stop at this point until the street is calm once again.

Generally, life in a big city like Cairo is full of noise. An intellectual can hardly be creative in such an atmosphere. Like all major cities, the roaring of machines and the clinging of steel conceal the humming of bees and the twittering of birds. Chimneys and discharged toxic smokes replace the gardens and parks that gave sweet smells. Noise also disturbs those sleeping, leading to muscular contractions, so that one wakes up feeling tired rather than fresh.

Now, in the Glorious Quran, are the verses that call to avoid noise, such as the following:

“Neither speak thy prayer aloud, nor speak it in a low tone, but seek a middle course between.” (Al-Israa: verse 110)

“O you who believe, raise not your voices above the voice of the Prophet. Nor speak aloud to him in talk, as you may speak aloud to one another, lest your deeds become void and you perceive not. Those that lower their voices in the presence of the apostle of Allah – their hearts has Allah tested for piety: for them is forgiveness and a great Reward.” (Al-Hujurat: verse 2,3).

“And be moderate in thy pace, and lower thy voice, for the harshest of sounds without doubt is the braying of the ass .” (Luqman: verse 19)

The Quran and the Sunnah enjoin quietude and self-control as well as caring for the feelings of others, and avoiding anything that can hurt them: even a loud voice. The first verse orders Muslims not to voice their prayer too loud, nor in an inaudible voice. They should seek a middle course in the “jahriyah” (in Arabic, articulated so as to be heard) in prayer and not the “sirriyah” (in Arabic; sub-vocalized). In the second verse, the Muslims are asked to lower their voices in the presence of Prophet Muhammad (peace be upon him). The injunction is both particular and general. Noise must generally be avoided particularly in solemn gatherings. The last verse carries Luqman’s exhortations to his son, and approves of them. The exhortations of previous prophets and apostles that are mentioned in the Quran are meant to be a source of advice to Muslims. In Luqman’s exhortation, the son is advised to lower his voice, and avoid speaking unnecessarily loud. To instill this message, he uses the metaphor of the braying ass, which implies that any pollutant of the environment or anything that is conducive to public discomfort is just as unpleasant and hateful.

At the time of Prophet (peace be upon him) his Companions were considering how to call for the five daily prayers at their appointed time. Suggestions included blowing a horn, drumming or ringing of bells, but all were turned down by Prophet Muhammad (peace be upon him). Allah revealed to one of the Companions a procedure in calling the prayer. He proposed it to Prophet who approved of it. But the Prophet chose Bilal to do so.

In conclusion, it should be noted that the noise pervading some so-called Islamic countries has nothing to do with Islam. Unless the teachings, principles and the code of behavior approved by Islam are adhered to, one can not pretend to be a real Muslim.

Pollution in the Natural Environment and Ethical Environment

Pollution is any quantitative or qualitative change in the animate or inanimate components that cannot be accommodated by the ecological systems without disturbing their balance. Before the industrial revolution there were no problems with pollution as the natural cycles of ecological systems could easily accommodate and recycle the waste of the different human activities.

Pollution as a quantitative change only rises as the rates increase of some natural components in the environment, such as the rise in carbon dioxide due to massive forest fires. Quantitative change may also occur as a result of a slight addition to a certain material in a sensitive area, such as oil spillages from tankers due to accidents or defects. It also occurs as a result of introducing lethal or toxic materials, even in their normal concentrations, such as mercury, carbon oxides and radioactive material.

Qualitative pollution results from the addition of synthetic or industrial compounds foreign to the natural ecological systems, which accumulate in water, air, food, or soil. Foremost among these are insecticides and herbicides. Pesticides containing chlorine, like DDT, have proven to be the most dangerous compound.

Pollution is one form of corruption (“fasal” in Arabic) mentioned in the Glorious Quran eight times. Counting the derivations of the word “fasal” mentioned elsewhere in the Quran raises the number to 49. “Fasal” involves physical corruption like disrupting the environmental phenomena and the contents of the universe (water, soil, food) by foolish human interference in the natural balance created by Allah the Almighty, Who did so wisely, perfectly and infallibly to fit the life of all creatures.

Water pollution in general means polluting water streams, wells, rivers, seas, rain and underground water in such a way that makes it unfit for man, animals, plants, or the sea and ocean creatures. Air pollution involves the discharge of gases, smoke and fumes (the solid, liquid and gaseous forms of matter) into the air

surrounding living creatures, and the change of its natural composition. This leads ultimately to the unsuitability of the habitat, contrary to what Allah willed for His creatures. Physiological, economic and biological damages are, in fact, devastating to man, animals, plants and other creatures.

It is highly portentous that pollution reached places hitherto unthinkable. The rate of lead in snow in Greenland was found to be higher than the rate some decades ago. This is a peculiar phenomenon as the island is almost deserted. It has no cars or factories. Finally, it was concluded that this high rate was attributed to the winds, which carried the vapor, smoke and gases from European factories to such remote territories.

Soil pollution is a form of corruption of the natural properties and compositions created by Allah to serve vegetation and the preservation of pure rainwater. Air pollutants can affect the water and soil also, since air, water and soil are systems that are closely interrelated.

Any form of reverting the straight-forwardness enjoined in the saying of Muhammad: "Say believe in Allah, then be straight forward," pollutes life in this world. The necessities of life are to be obtained honestly. Theft, bribery, embezzlement, and such things pollute what one does for a living. Islam defines the relationship between people and the society, and between them and the vast universe on the bases of love, amity, peace, cooperation, fraternity, and the rejection of grievances, envy, hatred and hard feelings. All forms of hatred, envy, spoiling the relationships between people, terrorizing the peaceful, usurping land and property, looting and plundering, or involving the world in destructive wars are pollution of the security and stability of life. Marriage is the proper form of satisfying the sexual activity. Adultery, fornication or homosexuality and such things are a pollution of the souls and the purity of genealogies.

The moral environment is the mental state of an individual, a group, or a country, within which the international acts of the individuals occur. It may be so wide as to include several countries or continents if their populations belong to one moral code and live according to a comprehensive moral ground.

This environment may be good or evil. A good moral environment encompasses the individuals of a society who live by certain morals like tolerance, patience, endurance, generosity, chivalry, courage, justice, charity, humility, pride and high energy and others. An evil moral environment is one pervaded by low morals like treachery, lying, cheating, trickery, panic, roughness, permissiveness, spouse insolence, indecency, slander, hypocrisy, arrogance, despair, etc.

Islam commends kindness and calls for spreading virtues among people. It lays down, the foundations for a healthy moral environment. The Messenger of Allah, Muhammad Ibn Abdullah (peace be upon him) is the epitome of this code. The Quran describes him in many ways.

The Prophet was enjoined to observe good manners and behaviour. The order applies to all Muslims:

"Repel (evil) with what is belief: Then will he between whom and thee was haired become as it were thy friend and intimate."

(Fussilat: verse 34)

The Messenger of Allah says that he has been sent to perfect the virtuous morals. This means that the previous heavenly messenger came to call for the worship of Allah alone and then for the virtues. Muhammad (peace be upon him) came to complete the framework of virtues.

Source: www.islam-online.net/english/Science/2000/4/article1.shtml