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NEED ON EARTH TO SAVE FUEL, ENERGY AND WATER

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ABSTRACT

Environment etymologically means surrounding.Detoriation of environment is one of the greatest problems in the world. World over for green environment and sustainable development we should think for new methods, technology and best practices. It is needed to save Fuel, Energy and water i.e.FEW.We must keep three words in our mind Reduce, Reuse and Recycle. Modern life style and Environmental pollution are playing important role for detoriation of environment and hike temperature on the earth. The main motto of world environmental day is to make aware people of world for protection of environment in the world.

KEYWORDS: *Fuel, Energy, water, Reduce, Reuse and Recycle.*

INTRODUCTION

We are observing green trees are gradually disappearing .At present very few green trees are seen in the dense population and the temperature of the earth is also increasing. Hence earth is becoming day by day hot and life is also becoming difficult. Due to disturbance and damage to environment, few years ago on 5th june1972 United Nations had declared 5thjune as world Environmental Day, in that year it had been decided to make suitable environment and save natural resources. Hence every year weareallconsidering5thJune as world Environmental Day. The main motto of world environmental day is to make aware people of world for protection of environment in the world. India was host of world environmental day in the year 2011.Environment conservation ACT was first implemented on19th November 1986 in India, in which legal Countrymen are not following the laws of environmental protection and these laws are not sufficient to make the people aware towards the environment. People are still destroying the natural resources. It is need to save **FUEL; ENERGY and WATER i.e. save (F.E.W.).**Now time has come to stop the cutting of green trees. Due to increase of industrialization in the world 40% of carbon dioxide has increased in the atmosphere.Itis expected up to year2050, population will become 9.5billion in that time three planets like earth will be requiredforlife. We must think for the use of minimum natural resources. The nature is the precious gift of god.we must keep three words in our mind REDUCE,REUSEand RECYCLE.REDUCE means we must use natural resources in minimum amount like water and fuel energyin daily life.REUSE,we should purchase those thing whichcan reused .For examplenews papers old books and cloathes.Plastics,utensils and paper made things can be recycled.

GREEN COMPUTING

It is also known as Green Technology is environmentally sustainable computing. Green Computing includes "designing, manufacturing, using, and disposing of computers, servers, and associated subsystems—such as monitors, printers, storage devices, and networking and communications systems — efficiently and effectively with minimal or no impact on the environment." Green Computing whose main aims is to reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime and promote the biodegradability or recyclability of defunct products and factory waste. Computers today are not only used in offices but also at homes, so the number of computers is increasing day by day and also the amount of electricity consumed by them which in turn are increasing the carbon contents in atmosphere. This problem has been realized by people and measures are being taken which help in minimizing the power usage of computers. Therefore, this is known as Green Computing. Green Computing is used because it- reduces energy usage from green computing techniques translates into lower carbon dioxide emissions, stemming from a reduction in the fossil fuel used in power plants and transportation, it conserves resources means less energy is required to produce, use, and dispose of products, it saves energy and resources and also saves money. Green computing even includes changing government policy to encourage recycling and lowering energy use by individuals and businesses.

BIODEGRADATION

Plastics are widely used worldwide. But lack of degradability and the decreasing of landfill sites growing water and land pollution problems. With the excessive use of plastics an increasing pressure on capacities of plastic waste disposal the need of biodegradable plastics and biodegradation of plastics waste has increasing importance in now a days. Biodegradation is necessary for water soluble or water-immiscible polymers because they eventually enter streams which can neither be recycled nor incinerated. So it is important to consider the biodegradation and the mechanism involved for the sustainable development. Biodegradation is considered to take place throughout three stages: bio-deterioration, bio-fragmentation and bio-assimilation along with the participation of abiotic factors. This paper reviews the latest development on biodegradation of biodegradable and conventional synthetic plastics and also the use of various techniques for analysis of degradation.

PHYTOREMEDIATION

Anthropogenic activities, they are significantly increased in the past few decades as a result of burning of fossil fuels, industrial activities, automotive emissions, use of metal-enriched materials, mining, farm manures, waste water irrigation, sewage sludge, pesticide usage, industrial and domestic wastes which are responsible for contamination of environment by increasing heavy metals Cr, Cu, Pb Cd, Hg, Mn, Ni, Al, Fe, Ti and Zn into the soils. Now a present day we need clean up the environment from these heavy metals. This could be achieved by a new technology known as phytoremediation, in which plants are being used to remove pollutants from the environment.Some aquatic plant like Hydrilla and parrot feather and algae like charales and potamogeton have been used as a tool of plant base technology of phytoremediation, namely rhizofiltration which remove contamination from water such as agricultural run – off, industrial discharge and nuclear material processing waste by adsorption and absorption by plant roots.Some terrestrial plants like Indian mustard, black mustard, sunflower, Populous *deltoids, Arabidopsis thaliana* and *Nicotiana tabacum* have been used as a tools of phytoremediation plants which reduced the heavy metals soil contamination by stabilizes wastes and prevent exposure pathway via wind and water erosion, provides hydraulic control; by breaks down the contaminant into its metabolic components, by volatized into atmosphere through the stomata.

WATER AND ENERGY

The water and energy are tightly interconnected .people are beginning to understand that if you save water, you save energy.it is also need to understand that if we will save energy ,they will save water as well. This in the long run may be even more important things to conserve.

Every source of electricity whether it comes from hydroelectricity, coal, natural gas, nuclearbiofuels, or even concerted solar requires lots of water. Finding of water for energy is not easy it creates a growing problem. Like every step of energy production requires water from mining to refining, processing to generate. Some of this water consumed evaporated as steam. Some of it is returned to watersheds in altered forms like water heated during coal fired electrical production and stored in cooling towers or ponds before being released at higher temperatures back into rivers. Produced water from coal bed methane extraction release underground water with high mineral content into water sheds. Deep drilling for seams of underground gas deposits rely on chemicals used in franking fluids which contaminate water sources when they leak.

Since more energy is required therefore more water is needed. But the availability of fresh water has already reached crisis proportions in many parts of the world. Some experts warn we should be more worried about peak fresh water than peak oil. Demand for biofuels is rapidly growing worldwide as petroleum based fuels is finite reserves. In this context, biodiesel and bio ethanol are popular bio fuels that are commercially available in various countries. Bio fuels can be prepared from edible biomass. However, this is already generating food versus fuel debate among the members of civil societies. Therefore, there are needs to synthesize bio fuels from no edible waste materials. Food wastes can be utilized as resources for the production of biodiesel and bio ethanol since they contain significant amount of lipids and carbohydrates. Utilisation of lipid and carbohydrates obtained from food waste for bio fuel production is an excellent example to demonstrate the enormous potential of waste valorisation for building a sustainable society.

SOLAR CHEMICAL REACTION SOLAR FUEL AND ARTIFICIAL PHOTOSYNTHESIS

Solar chemical processes use solar energy to drive chemical reactions. These processes offset energy that would otherwise come from a fossil fuel source and can also convert solar energy into storable and transportable fuels. Solar induced chemical reactions can be divided into thermo chemical or photochemical. A variety of fuels can be produced by artificial photosynthesis. The multielectron catalytic chemistry involved in making carbon-based fuels (such as methanol) from reduction of carbon dioxide is challenging; a feasible alternative is hydrogen production from protons, though use of water as the source of electrons (as plants do) requires mastering the multielectron oxidation of two water molecules to molecular oxygen. Some have envisaged working solar fuel plants in coastal metropolitan areas by 2050 – the splitting of sea water providing hydrogen to be run through adjacent fuel-cell electric power plants and the pure water by-product going directly into the municipal water system. Another vision involves all human structures covering the earth's surface (i.e., roads, vehicles and buildings) doing photosynthesis more efficiently than plants. Recycling waste not only save our natural resources but also help save energy. Inspired with swachh bharat mission Indian government launched India's first national air quality index (NAQI) in April, 2015. The NAQI will simplify air quality rendition and will help raise awareness about alarming levels of air quality across the country. To raise awareness about water conservation, the government directed the states of India to ensure that 50% of the work taken up by MNREGA should be for the improvement of water conservation. This includes construction of check dams and de-silting of water bodies. Save environment for a better future. Today everyone is dependent on the energy consuming devices, in our daily life we use heated water for shower, washing our hands, and for laundry without any apparent thinking of water wastage as well as it is an indirect use of an important source of energy. Similarly when we turn on the lights, enjoy the television, or use any electronic device we even do not think about the amount of water used to create this electricity which has made our life easy. Since we know that a significant amount of energy is embedded in water, therefore the efforts should be made for development of energy efficient program and to save the water.

It is a general overview on water - energy connection with some strategies to develop energy efficient program like by integrating energy efficiency and clean energy supply objectives, by maintaining the energy improvement program and by utilizing one source of water for multipurpose resources. We hope that this will resolve the water problems to some extent.

INCINERATION-GENERATED HEAT-PRODUCTION OF ELECTRICITY

The extra-modern incinerators can be used to generate heat which is used to help in the production of electric power. Solar energy based incinerator must be used in our country for the production of

electricity. Japan; Denmark and Sweden are well known countries using incineration-generated heat to run electricity. This will help boosting self self-sufficiency of electricity resources. Plastics contained in house-hold wastes require extra- high temperatures to burn down complex chemicals like dioxin, furan and other petroleum productions These can be separated and also collected for the production of petroleum oils which can also be used to generate electricity. Countries like Luxemburg, Netherland, Germany and France are treating municipal waste by solar incinerations which are also getting electricity from this manner. This will help recovery of various sought-after byproduct as Biogas; fuel gas, residual metals, and petroleum oil and Biodiesel. The **Aadhunik** heaps are required to be truned into scientifically equipped extra-modern incinerators, fitted with solar panels on the material bulk of the waste, 80-85%by volume, the conventional incinerators pollute the environment by producing ash, fuel gases and heat. Recycling is among the greatest measures of saving the environment. We must

think alternative methods for the generation of electricity and clean the environment by using the waste material for the generation of electric power. Proper garbage disposal helps in preventing air, water and land pollution and use of garbage for the generation of energy is also very important.

HIKE OF TEMPERATURE ON EARTH

Environmental pollution is playing important role for increase of temperature on the earth. Day temperature in the many cities in India is around 47^{0}c inspiteof this temperature night temperature is now gradually increasing. The temperature of last ten years of June month has been recordedInLucknow city.

Table is given below:-

Temperature Table-Degree centigrade

Date	month	year	maximum (Day)	minimum (Night, date)
08	June	2015	45.6^{0}C	26.7^{0}C (08 June)
23	June	2014	46.3^{0}C	22.^{0}C (04 June)
05	June	2013	38.5^{0}C	20.7^{0}C (07 June)
14	June	2012	45.5^{0}C	24.7^{0}C (23 June)
05	June	2011	42.0^{0}C	23.5^{0}C (21June)
01	June	2010	43.8^{0}C	23.8^{0}C (01 June)
22	June	2009	44.8^{0}C	20.8^{0}C (07 June)
02	June	2008	40.0^{0}C	22.6^{0}C (04 June)
03	June	2007	44.6^{0}C	22.0^{0}C (22june)
13	June	2006	40.O^0 C	22.o^{0}C (03 June)
02	June	2oo5	46.1^{0}C	21.80^{0}C (23june)

OZONE LAYER-DEPLETION

OZONE layer is present in the stratosphere (15-20 km height)It is concentrated at height of 20-25km sides .Ozone protects the earth from exposure to short wave ultraviolet rays(below300nm). However, as discovered by Farman (1982) a hole has appeared in the ozone layer over Antarctica. This OZONE HOLE has grown in the size over the years. In 1994alone, it widened from129 to133doboson units. A similar but smaller hole has also appeared over North Pole. Size of the holes varies with the seasons. Damage has occurred to ozone layer at other places. For example, it has thinned by 8% in the area over30^0-50^{0}N latitude between1979-1990.Thinning of ozone shield is mainly caused by a number of pollutant like chlorofluorocarbons, have maximum depleting potential of ozone layer. It is also responsible for increase of temperature. Cutting of green trees from road sides and development of building are also responsible for hike of temperature. And it is estimated1%thinning of ozone layer produces an extra 50,000 skin cancers and 1, 00,000cases of blindness due to cataract. Higher concentration of green house gases is slowly warming up the earth.

CONCLUSIONS

Conservation of environment involves the conservation of natural resources .The non-renewable resources have to be conserved as they cannot be replenished. The reserves of these resources such as fossil fuels are limited and man is heavily dependent on these resources. The government of different countries must contribute by making strict legislations to counter the activities that are not environmentally friendly and lead to unsustainable development.We should draw our attention for increasing green cover at all available places in the city Lucknow.School children, their parents and their teachers should be motivated to take plantation drives. As far as the rural areas of the district are concerned, plantation of trees [with thick leaf foliage], which provide shade, should be encouraged. Shrub, plants and trees are undoubtedly natures best gift to mankind. It is just our own interest to not just protect them but also faster their spread all across today the garden shelter and nurtures over 8,862 different plant varieties including rare species like Kalpvrikish,SkeletonForkFernand dating back million of years. It is our responsibility, after all to ensure that this legacy of greenery passes on to our future generation. Botanic Garden Of Indian Republic(BGIR)is committed to do this task.BGIR has decided to plant rare green plant species and make friendly environment across 163.79 acres, is playing a key role in the preservation and multiplication of Indians rare and endangered plant species.

Following things can help to save environment:-

- Join as many tree planting trips as you can.
- Use public transport, when you can,forevery travel
- Reduce emission from cars by walking or cycling. These are not just great alternative to driving, they are also great exercise.

- When going shopping, make it a habit to bring your own eco –bags and say no to plastic bags as much as possible.
- Send your drinking botteles,paper,usedoil,old battereries and used tires to depot for recycling or safe disposal;allthese very cause serious pollution.
- Do not pour chemicals and waste oil on to the ground or into drain leading to bodies of water.
- Whenever possible, separate biodegradable and recyclable waste fromnon-bioderdadable and work to reduce the amount of non – biodegradable or recyclable waste.
- Many municipalities already offer good recycling programmes.Allglass; cans and paper should be recycled, along with much plastic as possible.
- If possible, try carpooling to work, business presentation, events, or even to run errands. Think of ways you can reduce the number of trips you make using your car.
- Deforestation leads to excessive heating during summer and excessive cooling during winter.Itshould be stopped.
- Create a compost heap in your garden or use compost bin. This helps recycle food waste and other biodegradable materials.
- Fuel wood requirement should be reduced because naturally several million hectares of forest land have to be stripped to meet this demand.
- To give momentum to Van Mahotsava, it is tree plantation movement in India started since 1950.Every year in July andfebruary a large number of trees are planted every where. The
- Trees not only keep the pollution under check and moderate the climate but also lessen the pressure on forest.
- Light bulbs are an easy switch. Compact fluorescent bulbs last longer and use less energy than incandescent bulbs, so you will save money by using them.
- Invest in a set of canvas bags. You can use these for a lot of shopping. Most people use them for groceries, but bring them along when buying books, toys or even clothes .If they are too bulky, there are many others that fold up and slip into small purses.
- Utilize grey water for things like flushing the toilet and watering the garden.Ifyou use natural soap without harsh chemicals, the water from your bath or shower can be reused on your garden.And, this water can be reused to flushyour toilet. All need to do is put a bucket in the shower with you to collect the water, and then dump it down the toilet to flush.
- Switch off light after immediate requirement.

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