



Enviro Notes

Environment Periodical for change makers
(An Environment Awareness Initiative by Nirvaan Somany)

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Solar Energy

Solar energy is a renewable energy source that uses photovoltaic (PV) panels to convert sunlight into electricity. Over the past few decades, there has been a significant increase in the use of solar energy as a viable alternative to traditional fossil fuels.

The future of solar energy looks promising, as it has the potential to become a significant source of clean and renewable energy. Here are some reasons why:

1. **Cost Reduction:** The cost of solar panels has decreased significantly over the years, making solar energy more accessible and affordable. With the continuing advancements in technology, solar energy is likely to become even more cost-effective in the future.

2. **Environmental Benefits:** Solar energy is a clean and renewable energy source that produces no harmful emissions or pollutants. The use of solar energy helps to reduce greenhouse gas emissions, which contribute to climate change.

3. **Energy Independence:** Solar energy

allows individuals and communities to generate their own electricity, reducing their reliance on traditional power grids and increasing their energy independence.

4. **Job Creation:** The growth of the solar industry has created many new jobs in the installation, manufacturing, and maintenance of solar panels.

5. **Technological Advancements:** Research and development in solar technology continue to advance, leading to more efficient and effective solar panels and energy storage systems.

Overall, solar energy has a bright future as a significant source of clean and renewable energy. With continued innovation and investment, solar energy has the potential to play a major role in the transition towards a more sustainable energy system.

India has been a significant player in the development and deployment of solar energy. Some of the main solar energy centers in India are:

1. **Gujarat Solar Park:** Gujarat Solar Park is one of the largest solar parks in the world and is located in

Charanka village in Gujarat. It has a total capacity of 1,000 MW and covers an area of 5,384 acres.

2. **Kamuthi Solar Power Project:** The Kamuthi Solar Power Project is one of the largest solar power projects in the world and is located in Tamil Nadu. It has a total capacity of 648 MW and covers an area of 2,500 acres.

3. **Pavagada Solar Park:** Pavagada Solar Park is located in Karnataka and is currently the largest solar park in India, with a total capacity of 2,050 MW. It covers an area of 13,000 acres.

4. **Bhadla Solar Park:** Bhadla Solar Park is located in Rajasthan and has a total capacity of 2,245 MW, making it one of the largest solar parks in India.

5. **Kurnool Ultra Mega Solar Park:** Kurnool Ultra Mega Solar Park is located in Andhra Pradesh and has a total capacity of 1,000 MW. It is one of the largest solar parks in India and covers an area of 5,932 acres.

These solar energy centers have contributed significantly to India's renewable energy goals and have helped the country become one of the world's leading producers of solar energy.



Gujarat Solar Park

Natural Light and Its Benefits

Lighting is an essential aspect of our daily lives, affecting our mood, productivity, and health. Natural light and artificial light are two types of lighting that we encounter regularly, each with their advantages and disadvantages. In this article, we will explore the differences between natural light and artificial light and their impact on our lives.

Natural Light

Natural light is the light that comes from the sun, and it is the primary source of light on earth. It is a full-spectrum light that contains all the colours of the rainbow, and it varies in intensity and colour temperature throughout the day. Exposure to natural light has many benefits, including:

- 1. Health Benefits:** Exposure to natural light is essential for our health and well-being. It helps regulate our circadian rhythms, which control our sleep-wake cycles, hormone production, and immune function.
- 2. Mood Enhancement:** Natural light has been shown to enhance mood and reduce symptoms of depression and anxiety. It also promotes feelings of relaxation and calmness.
- 3. Energy Efficiency:** Natural light is free, and it is the most energy-efficient lighting source available. It can help reduce energy consumption and lower utility bills.
- 4. Sustainability:** Natural light is sustainable and has no negative impact on the environment. It is a renewable resource that we can harness to power our homes and businesses.

Artificial Light

Artificial light is light that

comes from man-made sources, such as lamps, light fixtures, and electronic devices. It can vary in colour temperature and intensity, and it is available in a wide range of styles and designs. While artificial light has many benefits, it also has some drawbacks, including:

- 1. Health Risks:** Exposure to artificial light at night can disrupt our circadian rhythms, leading to sleep disturbances and other health problems. It can also cause eye strain and headaches, especially when used for extended periods.
- 2. Energy Consumption:** Artificial light requires energy to produce, and it can contribute to high utility bills and increased energy consumption.
- 3. Environmental Impact:** The production and disposal of artificial light bulbs can have a negative impact on the environment. Traditional incandescent bulbs, for example, contain mercury and other toxic materials that can harm the environment.
- 4. Limited Benefits:** While artificial light can mimic the effects of natural light, it cannot replicate the full spectrum of natural light. As a result, it may not provide the same health and mood-enhancing benefits as natural light.

In conclusion, natural light and artificial light each have their advantages and disadvantages. Natural light offers numerous health benefits, is energy-efficient, and sustainable. Artificial light, on the other hand, is versatile, available in a wide range of designs, and can be used in any setting. The best approach is to use a combination of both natural and artificial light to maximize the benefits of each.

By prioritizing natural light whenever possible and using energy-efficient artificial light sources, we can improve our health, reduce energy consumption, and minimize our environmental impact.

5 BRIGHTENING HEALTH BENEFITS OF NATURAL LIGHT

Before modern times, most of human life took place in the great outdoors with lots of sunshine. Natural light is crucial for optimal health and well-being. How? Read on for 5 important health benefits of sunshine and natural light!

1 REDUCES BLOOD PRESSURE

Exposure to sunlight causes small amounts of nitric oxide to transfer from the skin to circulation. This lowers blood vessel tone and blood pressure, which in turn reduces the risk of heart attack and stroke.

2 REDUCES STRESS / ANXIETY

A study in Denmark found that exposure to daylight can reduce our anxiety response, as well as help regulate natural circadian rhythms that control sleep cycles. Less stress, more calm, and more sleep? Sign us up!

3 IMPROVES MOOD

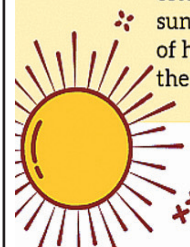
Winter's shorter days can be rough, making us feel cooped up and somewhat depressed. Sunlight, however, increases levels of serotonin, which is correlated with better mood and increased feelings of satisfaction and calm. According to at least one study from Australia, people can benefit from the mood-enhancing effects of sunlight regardless of the air temperature. So even when it's chilly, sunlight is still good for you!

4 MORE VITAMIN D

Vitamin D is associated with bone health and brain function, as well as other critical body functions. Making sure you get a little sunlight each day can increase your vitamin D levels and contribute to improved digestion/appetite, blood circulation, sleep quality, and even stronger bones.

5 MAKES LOSING WEIGHT EASIER

Yes, you read that right - sunlight can help make losing weight easier! Serotonin production stemming from sunlight exposure does more than just boost your mood. It also helps suppress your appetite. Extended hours of sunlight also tend to motivate us to get outside and exercise more often and for longer periods of time. Plus, the sunnier summer months mean more availability of healthy fresh fruits and vegetables. Bring on the extra sunlight!



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Sound Pollution

Sound pollution is a significant form of environmental pollution that has significant impacts on nature. It refers to the excessive or unwanted sound that disturbs the natural balance of the environment and affects the health and well-being of humans and wildlife.

One of the ways in which sound pollution is affecting nature is by disrupting animal behaviour. Sound pollution can cause significant changes in animal behaviour, leading to a decline in their population. It can disrupt the communication, feeding, mating, and migration patterns of animals. For example, noise pollution from ships can disrupt the communication of whales, leading to a decline in their population.

Another way sound pollution is affecting nature is by affecting bird life. Birds rely on sound for communication, navigation, and finding food. Excessive noise can make it difficult for them to hear their own calls, leading to communication breakdowns and affecting their survival.

Sound pollution can also disrupt ecosystems by affecting the plants and animals living in them. It can lead to changes in the diversity and abundance of species and alter the nutrient cycling and energy flow in ecosystems. This disruption can ultimately affect the well-being and survival of wildlife in the ecosystem.

Moreover, sound pollution can also have significant impacts on human health. Exposure to excessive noise can cause stress, anxiety, hearing loss, and sleep disturbance. It can also lead to cardiovascular problems and other health issues, thus affecting human well-being.

Lastly, sound pollution can affect the natural sounds of the environment. Natural sounds, such as the sound of flowing water, bird calls, and rustling leaves, are essential for the well-being of humans and wildlife. Excessive noise can drown out these natural sounds, leading to a loss of biodiversity and affecting the natural balance of the environment.

It is essential to take measures to reduce sound pollution and preserve the natural sounds of the environment to maintain the natural balance of the ecosystem and protect the well-being of humans and wildlife. Fortunately, there are several measures that we can take to reduce the harmful effects of noise pollution on nature.

One of the most effective ways to reduce noise pollution's harmful effects on nature is to create noise barriers. This can involve building walls or fences around sources of noise, such as highways or industrial areas. Noise barriers can help to reduce the amount of noise that reaches natural habitats,


such as forests and wetlands, and protect the wildlife living there.

Another way to reduce the harmful effects of noise pollution on nature is to implement urban planning measures. This can include zoning laws that prohibit noisy activities in residential areas and building codes that require sound insulation in buildings. These measures can help to reduce the amount of noise that reaches natural habitats and protect wildlife from harmful noise levels.





Planting trees and vegetation can also help to reduce the harmful effects of noise pollution on nature. Trees and other vegetation can act as natural sound barriers, absorbing sound waves and reducing noise levels. Planting trees and other vegetation around busy roads, highways, and industrial areas can help to reduce noise pollution and protect wildlife habitats.

In addition to these measures, reducing personal noise can also help to reduce the harmful effects of noise pollution on nature. This can involve avoiding loud music and noisy activities during late hours, using low-volume devices, and keeping vehicles well-maintained to avoid excessive noise from engines.





NOISE POLLUTION IN THE OCEAN






AFFECTS MARINE ANIMAL'S ABILITY TO

COMMUNICATE			LOCATE PREY
AVOID PREDATION			NAVIGATE

CAUSES OF NOISE POLLUTION

BOAT TRAFFIC			MILITARY ACTIVITY
RECREATIONAL WATER SPORTS			FOSSIL FUEL EXTRACTION

WHAT CAN BE DONE

		
SLOW DOWN AND AVOID MARINE SENSITIVE AREAS	MAINTAIN AND OPTIMIZE BOATS AND ENGINES	USE ECO-FRIENDLY ENERGY SOURCES

WHAT TWO DEGREES TEMPERATURE RISE MEANS TO OUR EARTH

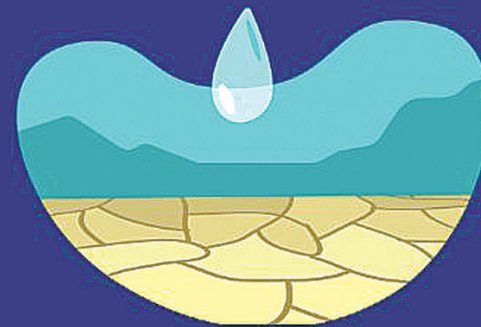


Since the last century, the Earth has already experienced an exponential rise in temperature by 1°C. If the increase continues to reach 2°C in the future, the consequences will be catastrophic and irreversible.



Once every five years, 37% of the world population is exposed to extreme heatwaves.

More than 400 million people worldwide live with water scarcity.



The earth loses 18% of insects, 16% of plants, 8% of vertebrates.

The coral reefs around the world decline up to 99%.



Sea levels rise by up to 46 cm and impact 30 to 80 million people.