POSSIBLE SOLUTIONS THAT CAN HELP SOLVE CLIMATE CHANGE.

Climate change is the long term changes in the climate that occur over decades, centuries or longer. It is caused by rapidly increasing greenhouse gases in earth’s atmosphere due primarily to burning fossil fuels. These heat trapping gases are warming the earth and the oceans resulting in rising sea levels, changes in storm patterns, altered ocean currents, changes in rainfall, melting snow and ice, more extreme heat events and drought. These impacts are projected to continue and in some cases, intensify, affecting human health, infrastructure, forests, agriculture and fresh water supplies. There are several climate change solutions that may be of help.

1. Use of renewable energy.

Transitioning from fossil fuels to clean energy is the key to winning the fight against climate change. The most common sources of renewable energy are:

1. Solar energy. It is produced when light from the sun is absorbed by solar cells and turned directly into electricity. Solar produces less life-cycle GHG emissions than conventional fossil fuel energy sources. It helps also to reduce carbon dioxide emissions and combats climate change by replacing the burning of fossil fuels with a clean, renewable energy source. Solar power is the best renewable energy source currently available for mitigating climate change.
2. Wind energy. Unlike solar panels which convert the sun’s energy directly into electricity wind turbines produce electricity more conventionally. Generating energy from wind does not produce or release any carbon emissions. By replacing electricity generated from other sources such as fossil fuel power stations, wind energy can lead to an overall reduction in carbon emissions. The energy used in manufacturing and installing wind turbines can also be paid back relatively quickly. It is very clean energy source which does not pollute or produce any waste during operation.
3. Geothermal and hydroelectric energy. Geothermal energy works by drilling deep underground and pumping extremely hot water up to the earth’s surface, where it is then converted into steam that once pressurized, spins a generator to create electricity. Hydroelectric energy uses gravity to pull water downward through a pipe at high speeds and pressure, the force of this moving water is used to spin a generator’s rotor. Today’s geothermal plants are considered clean and renewable so long as the water and steam they bring up to the surface is redeposited underground after use.
4. Biomass energy. Burning of organic material like wood, agricultural products reduce carbon emissions. However the plants that are the source of biomass for energy capture almost the same amount of carbon dioxide through photosynthesis while growing as is released when biomass is burned, which can make biomass a carbon-neutral energy source.
5. The other way of controlling climate change is by using sustainable transportation. Transportation is a top source of greenhouse gases, so eliminating pollution from the many vehicles driving across the planet, it is essential to achieving net-zero global emissions. Governments around the world are setting goals and binding requirements to phase out the sale of gas-powered internal combustion engine vehicles. This shift will benefit our grid: electrical vehicles will help reduce climate change because the do not produce the carbon oxide gas produced by vehicles that use fuel. Also by increasing access to public transportation such as buses, we can cut down on car trips that keep millions of tons of carbon dioxide out of the atmosphere every year. And by encouraging zero-emissions forms of transportation, such as walking, we can reduce emissions even more.
6. Greater energy efficiency. Energy efficiency delivers a number of environmental benefits. It reduces green house gases emissions, both direct emissions from the fossil fuel combustion or consumption and indirect emissions reductions from electricity generation. This help in reducing air pollution. Energy efficient homes and houses and buildings are also better equipped to switch to renewable energy which does not produce harmful emissions. At home you can save money on energy bills also by making energy efficient and weatherization upgrades such as adding insulation, using LED lighting and installing a heat pump that reduce your energy use and can improve comfort. Energy efficient buildings cost less to heat, cool and operate while industry and manufacturing plants can make products at lower cost. Energy efficient transportation result in fuel savings and regulates the emission of carbon dioxide. Energy efficiency improvements reduce the amount of electricity on the grid at one time. Reducing fossil fuel use results to clean air, water and land all of which also affects human health especially those in marginalized areas and people with conditions that are exacerbated by pollution.
7. Ending our reliance on fossil fuels. The most important thing that we can do to reduce or solve climate change is to drastically reduce our consumption of fossil fuels. The burning of coal, oil and natural gas in our buildings, industrial processes and transportation is responsible for vast majority of emissions that are warming the planet . in addition, dirty energy comes with unacceptable ecological and human health impacts. To help solve climate change, we must replace coal, oil and gas with renewable and efficient energy sources. Use of LED light bulbs which are more efficient and last long time. Turning off the lights, when you leave a room for more than fifteen minutes. The power saved reduces demand on electric utilities, which in turn require less output from power plants that burn fossil fuels. Using of appliances with energy star label, which is only placed on products that meet high efficiency standards. To inform consumers, the label usually displays a calculation of annual savings as a percentage or monetary value and just about any home appliance. We can also avoid reusing products that require fossil fuel resources to produce. By avoiding paper or plastic shopping bags, we can reduce demand in production process, which is fossil fuel intensive. Purchasing goods manufactured with recycled materials helps also reduce demand for fossil fuels too.
8. Better forestry management and sustainable agriculture. Some of our strongest allies in the fight against climate change are the tree, plants and soil that store massive amounts of carbon at ground level or underground. Without the aid of carbon sinks, life on the earth would be impossible, as atmospheric temperatures would rise to levels like those found on Venus. Whenever we clear forests for timber or rip out wetlands, we release that climate warming carbon into the air. Also the widespread overuse of nitrogen based fertilizers on cropland and generations of industrial scale livestock farming practices have led to the release of unprecedented amounts of nitrogen oxide and methane, powerful greenhouse gases, into our atmosphere. For that reason we need to treat our managed landscapes with as much care as we treat wild ones. Adopting practices such as or associated with organic and regenerative agriculture cover crops, pesticide use reduction, rotation, rotational grazing and compost instead of synthetic fertilizers will help nurture the soil yield healthier foods and pay a climate dividend too.
9. The other way of controlling or solving climate change is buy using sustainable buildings. The energy used in our buildings to keep the lights on and appliances running, to warm them or cooling them, to cook and to heat water makes them the single largest source of carbon pollution in most cities. Making building more efficient by upgrading windows and adding insulation to attics and walls will bring these numbers down. That is why its important that we raise public awareness of cost and carbon saving changes that individuals can make in their homes and workplaces and make it easier for people to purchase and install energy efficient technology, such as heat pumps and certified appliances. We also need to see a dedication from private business and governments for further building decarbonization, which simply is to make buildings more efficient and replacing fossil fuel burning systems and appliances with clean powered ones. Policy tools that can help us get there including city and state mandates that all newly constructed homes, offices and other buildings be outfitted with efficient all electric systems for heating, cooling and hot water, requirements that municipalities and states meet the latest and most stringent energy conservation standards when adopting or updating their building codes would also be an impact.
10. Industrial solutions. Heavy industry such as the factories and facilities that produce our goods, are responsible for a quarter of greenhouse gas emissions. Most industrial emissions come from making a small set of carbon intensive products: basic chemicals, iron and steel, cement, aluminium, glass and paper. Complicating matters is the fact that many industrial plants will stay for decades operating, so the emission of green house gases will not reduce easily. Given these long horizons for building and retrofitting industrial sites, starting investments and plans now is critical. What we should do is sharply reduce heavy industry’s climate emissions as well as local pollution. They should be scalable and widely available. There are many ways to reduce greenhouse gas emissions from the industrial sector. They include energy efficiency, fuel switching, combined heat and power, use of renewable energy and the more efficient use and recycling of materials. This can help solve or reduce climate change.
11. Technological solutions. Climate technologies that help us reduce greenhouse gas emissions include renewable energies such as wind energy, solar power and hydro power. Technology affects climate change in many ways like, consumption of natural resources. In this practice, the production of electronic devices coupled with programmed obsolescence and the development of increasingly powerful infrastructures require a large amount of natural resources such as the extraction of minerals, metals and fossil fuels. Generation of electronic waste also affect the climate when there is rapid obsolescence of technology and the constant supply of new products which generate a large amount of waste. To protect the climate and the environment, we need to use renewable energies, practice waste managements such as collection and treatment, recycling and appropriate final disposal of waste generated by technological activities. Also efficient management of natural resources is essential to ensure long term sustainability and reduce the environmental impact of our activities. In addition we need to promote sustainable innovation and raise awareness of the importance of preserving natural environments. With the right approach, technology is a powerful tool for building a greener and more sustainable future.
12. We need to restore nature to absorb more carbon. The natural world is very good at cleaning up our emissions, but we need to look after it. Planting trees in the right places or giving land back to nature through rewilding schemes is a good place to start. This is because photosynthesizing plants draw carbon dioxide as they grow, locking away in soils.
13. Protecting the water bodies also may help in reducing or solving climate change. Example, oceans absorb large amounts of carbon dioxide from the atmosphere, which helps to keep our climate stable. But many are used for oil and gas drilling threatened by deep sea mining. Protecting oceans and large water bodies and the life in them is ultimately a way to protect ourselves from climate change.
14. By reducing how much people consume will also help. This includes our transport, fashion, food and other lifestyle choices all have different impacts on climate. This is often by design fashion and technology companies. By reducing overall consumption in more wealthy countries can help put less strain on the planet.

Climate change is the most significant problem facing the world. Global warming increases day by day. We need to reach net zero carbon emissions to reduce global warming. Citizens and governments can choose among several options in response to this information. They can change their pattern of energy production and usage in order to limit emissions of green house gases and hence the magnitude of climate changes.It is easy to feel overwhelmed and to feel climate change is too big to solve. But by doing all the above activities, we will make better choices about where we get our energy. But the best way is to take collective action. This will pressurize governments and corporations to change their policies and business practices and it will help reduce and solve climate change.