

Reversing Climate Change: Prospects and Challenges

1. Introduction: Climate change is the biggest threat to human existence which needs to be reversed. Positive steps are being taken to reverse it and mitigate its effects but there are certain challenges along the way. By tackling the challenges we can increase the prospects of reversing climate change.

2. Prospects and Challenges for reversing climate change

3. Prospects

- i. Global efforts to reduce emissions
- ii. Allocation of funds for fighting climate change
- iii. Public-Private investments in green technology
- iv. Research and Development in negative emission technologies
- v. Awareness among people

4. Challenges

- i. Climate unconscious leaders
- ii. War-disharmony
- iii. Rich countries vs poor countries' emissions

IV. Overpopulation requires more food.

V. Eating meat

5) Way forward

a) Personal responsibility

b) Implementation of climate sensitive technology

c) voting for the right leaders

d) helping people to adapt

6) Conclusion.

With the passage of time our Earth has become warmer.

With a mere increase of 1.2°C - 1.3°C we have started to see catastrophic events such as enormous wildfires^{in Amazon}, unprecedented heatwaves in Europe, superfloods like in Pakistan, cyclones in Bangladesh. ~~and~~ It is feared by many scientists that we might go onto increasing the global temperature by more than 2°C which would be even more disastrous than the current extreme ~~we~~ climate events we face. The massive carbon footprint of humans have caused this global warming which has led us to climate change which needs to be reversed to ensure human survival in the upcoming generations.

~~By following~~ Global platforms have recognised the need to fight climate change and efforts are being done to bring awareness among people of the issue at their doorstep.

Furthermore investments are being made in research and development of technology that will us to mitigate and reverse ~~the effects of~~ climate change. ~~Then~~ There is some prospect in reversing climate change if we continue to make efforts and ~~try~~ take the right steps to overcome the challenges that come in our way. If we continue to find new ways of feeding the population without producing harmful gases; if we vote for the right leaders who formulate climate sensitive policies and who avoid ~~war~~ indulgence in war and if we ~~can~~ all come on the same page in ~~fight~~ reversing the climate change then we can surely reach to the end of this bumpy road safely.

Reversing climate change is likely possible as every year global leaders meet each other in Conference of Parties and make plans to tackle ~~environment~~ environment change collectively.

People are becoming more and more aware of the grave situation they are in. First people believed it as a myth but now they believe climate change is 100% true. Awareness of people will pave way towards taking personal responsibility of individual carbon footprint. Many Venture Capitals are working and investing in companies to ensure net zero emissions. Governments are also allocating funds for investing in green technology as well as to in helping people to adapt to the effects of climate change. Research and Development is also taking going on new areas of renewable energy sources as well as negative emission technologies like direct carbon capture and solar geo engineering. ~~Alongside~~ Despite all the green flags we still have a few red flags along the way. Our population is growing more and more and we don't have clean

ways to produce food for it. Other than that political disputes which lead to disharmony among states and even wars cause impediments to the global climate change reversal movement. Political leaders ~~which don't~~ who don't care for climate change are a big problem. To them short term gains are more valuable as compared to the long term loss of the environment. Other than that, the price of technology required for fighting climate change is high and is in its early stages of development leaving us with very short time left and also making it difficult for developing countries to adopt this technology who blames the developed world for this huge problem and is less willing to slow down its own development at the cost of environmental damage. So we need to come up with ways to overcome these challenges by fulfilling our personal responsibilities, voting for the right leaders and asking people

to invest in the new technology
so the prices of ~~get~~ down.

~~Since the~~
The world first joined hands with each other in the 1992 Earth Summit in Rio De Janeiro and came up with it's Agenda 2020 which was the first initiative at global level to work for the environment. The second most significant event was the Kyoto Protocol in 2007 which introduced countries with carbon budget which was also a right step in the right direction. Then the most important of them all came in 2015 which was the paris agreement in which the world became united to work towards achieving the 1.5°C target of global warming from the pre industrial times. The significance of these events is the unification of all the countries despite their political differences, rivalries, issues and working together for

one cause is promising for a greener future.

The world has started working rigorously on green technology investment since the COP21 in 2015. At first 21 companies made it their target to achieve net zero but now the number has risen to 3671 companies [Bill Gates notes.com]. The investments in renewable energy had lowered the prices of solar panels and wind turbines which makes them more affordable. ~~US~~ Private companies like Breakthrough Energies are ~~working~~ investing huge sums of money to grow companies with net zero emissions.

Countries are taking steps introduce policies that allocate part of their budget to work on carbon free technology and to help countries that are affected by climate change to help people adapt

to climate change. US has announced \$5 billion worth of laws which include the CHIPS and Science Act, Infrastructure law, Bipartisan law that work for development of greener technology. It has also donate \$200 million dollars to Pakistan because of it's the recent super floods. Similarly Europe has also announced to speed up it's progress by limiting it's reductions from 48% to 55% by 2030 and also made it a part of their law to achieve net zero by 2050.

~~One~~ Another ray of hope coming from the end of this dark tunnel is the research and development in negative emission technologies like Direct CO₂ capture or solar geo engineering.

With the help of ~~of~~ negative emission technology, the amount of CO₂ present in air can be reduced by removing CO₂ from air and burying it underground or making sealants or packaging from

it. This technology is expensive and needs developing but it surely ~~helps countries~~ can help countries in achieving their net zero target by the end of 2050 or this century.

~~But~~
Another positive indicator is the growing awareness of ~~peop~~ common people regarding climate change and its repercussions. According to recent poll by UN, the biggest issue mankind is facing ~~is~~ currently is climate change. This is a unfortunate victory of climate activists as they succeeded in warning people about climate change but people learned it the hard way in lessons taught by climate disasters. Before that people ~~considered~~ debated ~~over~~ ~~if~~ whether it's a myth or reality but now the debate is finished and people can take charge by taking personal responsibility to reduce their carbon footprint.

also
On the contrary we face many challenges, obstacles that need to be overcome. The ~~biggest~~ biggest issue is of having bad leaders. ~~at~~ ~~on~~ Having leaders that don't believe in climate change only accelerate climate change by implementing harmful policies to the environment. Donald Trump is the biggest example who pulled US out of Paris agreement and encouraged setting up of new coal power plants in US.

Other challenge is the political disharmony in the shape of war. The Russian Ukraine war lead to stoppage of supply of gas from Russia through the western pipeline which caused huge pressures for Europe in terms of energy crisis, especially for Norway. There have been debates going on to reshift to coal power plants and to explore their fossil fuel reserves underground for energy generation. This also leads to disagreements at international forums to fight climate change.

The solutions to climate change are also not straightforward as either it's not easy to tackle it alone or there is a lack of will to solve it. Simply shifting to electric cars isn't enough for instance as according to WRI 2020 report 2m of road emits 1.6 tonnes of CO₂ which approximately equal to 1.3 tonnes of CO₂ emitted in making a car unit. If we put heavy taxes on coal power plants then all the other industries running on it's help will either go bankrupt or will raise their prices. It is a cycle of gains which doesn't let cost of fuel to go high which is why it is mostly subsidized.

There is also this conflict of interest in gaining more and power and wealth and climbing higher and higher the social class ladder which favors short term gains at the cost of environment. People

and if their leaders are mostly not willing due to the ~~propagand~~ various propagandas like climate change cannot be reversed, efforts made today will not benefit us but people 100 years later, we can only adapt to climate change and do nothing else etc. These kind of propagandas cause people to be demotivated and become guiltless towards their contributions towards climate change.

Then the technology we have right now is either at it's early stages of development or either too expensive. The negative emissions technology also puts people into a more comfortable position and then they become lazy in achieving their targets effectively knowing that they can produce more carbon as direct CO₂ capturing technology will save them. Other than that solar geo engineering is a highly skeptical phenomena which reflects sunlight

back in space as tiny particles will be spread in air that will reflect it. People are afraid that it can even lead us to worse catastrophes of failing any moment.

Last but not the least, we are going to have a problem of overpopulation. According to UN report of 2020, in the next 50 years we are going to reach 10 billion population and we don't have sustainable methods to produce crop in order to feed them.

Our crops are mostly produced with the help of fertilizers and manure that produce harmful gases. Around 40% of land is used for

~~There is still a way on to get out of this quicksand of climate change~~
→ animal grazing which can be used for forests.

There is still time left for us to act responsibly in order to reverse climate change and its effects. Keeping in mind that it is a long term process so our first

step should be to help people adapt to this climate change by donating to climate affected people and rehabilitating them. Then we as individuals should work for ~~reason~~ responsibly reducing our carbon footprint. Turn off extra lights, turn avoid artificial cooling, use insul double glazed windows, switch to electric cars, eat less meat, plant trees, use public transport etc.

We cannot stop climate change entirely through individual efforts but we cannot also stop climate change without individual efforts.

Furthermore, we should make sure our votes count and elect the right leader who would work for climate change and work for regional and international cooperation ~~while not~~ without sacrificing our national interests. If a leader does the opposite then we should vote them out

or auster them through legal channel.

Policies need to be made and implemented worldwide in favour of climate change that will favour the enrichment of renewable energies and cut down carbon emitting industries carbon content in an efficient and incentivised manner. Alongside, more and more investment should be made in research and development of new technology ~~xxx~~ in order to make it cheaper, ~~more~~ widely available and more effective.

To sum it all, climate change is very hard to reverse but consistent and bold steps needs to be taken in order to make it more likely to be possible and maximum efforts should be made to overcome the challenges we see in shape of bad leaders wars, expensive technology and overpopulation.

Right steps in the right direction
can and will make reversal of
climate change happen.