



Review Paper

## Industrial Ecosystem: To reduce Global warming

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### Abstract

*Green House Gases affect our environment and causes Global warming. That the some international and national endeavor to the as in to alleviate of enhances to the assemblage to chlorofluocarbon gasses' effects by to idea of the carbon base credits. The carbon base market component has a target that allows the market mechanism to derived industrial and commercial processes towards reducing emissions and reduce the carbon intensively approach. This idea can be solved by the concept of Industrial Ecosystem. The industrial system has a deep connection with the natural ecosystem, which remains forever. Which offers a perspective in eco-adaptation and ecosystem. Because in the industrial ecological system it is very important and necessary to consider industries as an interactive system instead of separate components. It is imperative to connected industrial waste producers to an operating web of disposal sinks that also decrease the total amount of industrial waste material lost to the waste intermediate Processes.*

**Keywords:** Industrial Ecosystem, industrial waste (GHGs).

### Introduction

Global warming is due to the continuous heating of the general surface of the earth due to the effect of green house gasses<sup>7</sup>. Like the same as to carbon dioxide emissions from burnings of fossil fuel and from to deforestation which trapping heat that would escaped from the Earth. It's types of the greenhouse effects. Greenhouse gases effects are release in the atmosphere by combustion of convectional fuels. Carbon emissions have been high enough to boost the amount of carbon dioxide in the environment currently around 390ppm. It is about 30% greater than atmospheric carbon dioxide before the industrial revolution. Burning of the Fossil Fuels for the generation of power, transportation and heating and also to the manufacturing of the cement all the resultant in to the total worldwide emissions of about 22 billions tonnes of the carbon dioxide of the atmosphere every years. As in regarding to a other third form of transportation a third of it's comes from the generation of electricity and a third from each all else resources. As some of the exuberance of carbon dioxide in to the environment is absorb next to oceans like carbonic acid. That the resulting rapidly losses in planktonic and acidification coral or shellfish.

Half or more of the world populations lives in areas that are potentially in danger to climate change. 1.1°C above pre-industrial levels due to continuous energy and sky and land use along with the burning of fossil fuels for most of the eons. Global warming has happened above. Which has resulted in more and more frequent extreme weather events and has become increasingly dangerous. There has been a huge impact

on people and nature in every region of the world. At the present time, it is necessary that to bridge the gap between them, it is necessary that adaptive action towards climate change is urgently needed. In the meantime, keeping warming in each region to 1.5°C above preindustrial levels will required further deep and continuous diminution in green house gas emission. The solution to this problem lies in the development of climate adaptation. Reducing emissions of greenhouse gases and avoiding them includes adapting to climate change and adjusting practices that provide wider benefits. In this report, an attempt has been made to tell that which focuses on the damages caused by climate change, as we are already experiencing and will do in the future<sup>1</sup>.

Significantly global changes of global warming and expected climate change that have been observed around the world in the 21st century and it has come to the fore that during the last 65 years, environmental, socio-economic, climate change with its impact on different components of ecological and socio-political issues has remained a very complex challenge globally including rising temperatures around the world. Climate change to the problems of the earth's climate had increased manifold alongside the beginning of the Industrial revolution. While it is not possible to detail to the exact aftermath of the climate change by region, it has been suggested that appropriate action and immediate attention can increase the chances of controlling its devastating effects<sup>2-11</sup>. As sooner to the industrial revolution natural resources includes seismic activities and volcano's were considered to be a typical sources of greenhouse gases effects

likes as methane, nitrous oxide, water and carbon dioxide in the atmosphere<sup>12-16</sup>.

As in invention is a expected to as in to compensate a key main role in encouragement national and sub-national decarbonizations procedures with greater confidence as the impacts of climate change become clearer. Recent public and private development sectors are presented with varying technological approaches from non-carbon or low technologies to addressing greenhouse gases effects to difficult captured and storages innovation the reduce of the sources of the consequences of global warming<sup>17,18</sup>.

Mostly innovative technologies are primarily complex in addressing the effects or causes of climate change as they are associated with the highest levels of risks and uncertainties. That these technologies frequently rely on the knowledge's from the distinct areas and are inherent in to the innovations ecosystem involving several distinct organizations. Such difficulty results in an expected increase in risks and uncertainty of success. As the need for coordination increases, mainly from all participants within the system<sup>19-21</sup>.

As to according of the Wang et al., information's abuts reductions in carbon dioxide emissions, energy savings and materials positively influence user perceptions of production prices. As electric cars, there is increasing diversities in to the consumers preference for lower carbon innovativeness product like to as not all end users can afford or have access to decarbonizes production<sup>22-24</sup>.

The study highlights that the management of climate environmental problems requires technical skills and a deep understanding of science in the context of solving various technical problems. Because it is necessary to use it to reduce negative consequences. (e.g. carbon technologies) However, sustainable technological development on the other hand is an institutional, economic, cultural and political effort. Which faces different non-technical situations. Many domains, such as the supply of water and energy production can be classified as innovative systems and social technologies<sup>25,26</sup>.

It examines the relationship between environmental concerns, globalization, and the effects of the green economy, such as industrial and demonstration sectors of organic transfer. Because carbon and industrial environmental efficiency transfer areas can sometimes affect the quality of the environment. As it includes environmental disasters causes by the rising level of the carbon dioxide and others toxicity emission extreme weather events and unprecedented global warming<sup>27</sup>.

### The Industrial pollution

Today industrial pollution has become the main reason for global warming which can be directly linked to global warming. This form of industrial pollution is one of the main reasons. As

today industrial pollution mainly poses a very serious problem for the entire planet. It is a form of the pollution, which has been going on continuously since ancient times. But industrial pollutions continued to grow rapidly in the early 1800s with industrial pollution allowing for ever greater volumes and mechanized means of the production and subsequently generating to the correspondingly increased in to the pollution<sup>28</sup>.

### The Carbon Footprint

Because the carbon footprint of a greenhouse gas effects is also defined as the total set of carbon and methane emission due to historically defined population systems and activities all these relevant storages, sources and sinks are depend on a demographic system and an activities of interest. The CO<sub>2</sub> equation for 100 emission causes by an organizations event and products or persons<sup>29</sup>. To measure of the total amount of carbon dioxide-year<sup>30</sup>.

### Carbon Credit

A carbon credit is a carbon base credit that's a general terms for the any permit or tradable certificates as the rights to emitted one tonnes of carbon dioxide and CO<sub>2</sub> equivalents for global warming gasses effects equivalents to the one tonnes of carbon dioxide represented<sup>31-33</sup>. As to the burnings of fossil fuel is to a majors resource of greenhouse gases effects emissions<sup>33,34</sup> mainly for to cements, textiles, electricity, fertilizers, steel, and many another industries and that uses fossils fuels (oil, natural gases coals-fired, coals). The main greenhouse gases emitting hydro fluorocarbons, methane and nitrous oxide etc. all of which continuously increases the ability of the atmosphere to trapped infra red energies and thusly affects on the clime<sup>34</sup>.

### The industrial ecosystem

Because it is also based on an analogy of industrial systems and systems of natural ecosystems, as it also provides a cyclic system under which environmental problems can also be managed in nature, because of industrial policies of ecosystems. It also stands in the tradition of thoughts and ideas about sustainable development of the concept, as the economic goal of development also connects the needs of climate protection and resource conservation to the ecosystem. As industrial and ecological greatly helps to companies and becomes more and more competitively by the improved there environmental strategic or performance plans. Ionization Energy helping community developed or maintains a strong industrial base or infra structured sans sacrificing to the qualities of their environment. As its plays a key role in designing policies or regulation that the improved environmental protections while buildings business and competitiveness for government agencies. Kalundborg is an area in Denmark consisting of a network of industrial symbiosis where companies mostly from to each other's realm collaborated and assist in using to each

other's by products or otherwise shares sources. Kalundborg wall board manufacturers also purchases and diverted surplus gases from the refineries as a as in substituted for coals likes as sulfur is extracted from the gases and sold to sulfuric acid plants<sup>36</sup>.

## Results and Discussion

As the high level of heat trapping carbon dioxide in the atmosphere also affects the planet in many ways. From which we can say that the increasing heat energy also greatly affects the natural climate systems of the earth. As the temperature of oceans and land is increasing continuously. The solid water flakes are continuously contracting among mountains as well as in Arctic region. Storms, rains and droughts are become hyper periodic and highly dangerous. So potable hydrogen monoxide is becoming less and less and sea level is continuing to rise and there is also a problem of more flooding in cities, villages and crop areas of low lying countries.

As we know, the discipline of the industrial ecosystem is also largely based on the underlying assumption that if we fine-tune our technologies, the problems of environmental and non-sustainability and pollution can be solved, and as the planet is increasingly becoming a difficult place to live and earth's self regulating system are constantly being altered. As the earth continues to provide a less stable environment it also provides many of its living species and the world economy with basic services and resources. The capacity to supply goods is constantly being lost.

Development of Industrial Ecosystem may be the solution of all the major problems like Global warming, pollution and carbon emission to some extent and when this industrial eco-system is

implemented properly, for longer run it may turn as the most beneficial and the best Industrial Management System to control Global Warming, pollution, and other problems. Development of Industrial Ecosystem may result in effective waste management, rapid Industrial growth and society development with economical and ecological benefits. The problem of Carbon emission in the atmosphere can be solved by our tentative idea for the development of absorption technique and connecting this technique with either the coupled industry or by industrial interlinking waste management web by specific compound.

Government should promote carbon credit awards for the most environment friendly Industry. Save Electricity Mission should be launched in several public places like offices, schools, colleges etc because India has more Thermal Power Plants than Hydro Power Plants which a large amount of coal and increases Green House gases emission.

## Some social and our Behavioral aspect: Think it Over

We must find new ways, to use these resources efficiently and judiciously. i. 1. Minimize the use of automobiles, and use more and more bicycle, public transport system, go for car pooling. ii. Plant and save more and more trees. iii. Avoid burning dry leaves, wood, plastic, polythene and other waste materials. iv. Eco-friendly festival celebrations. v. Minimize the use of crackers during cricket matches, other sports events, political events, wedding celebrations and various other celebrations. vi. Minimize the use of weapons and war practices.



Figure-1: Kalundborg Eco-industrial Park<sup>37</sup>.

## Conclusion

Industrial Ecosystem to solve the problems of environmental pollution and Economy. Now we observe the consequence of climate change in form of land slide and floods. Scientist should focus on technological innovation for industrial Ecosystem. The environment need of climate protection and balancing of nature will fulfill by the concept of industrial. Industrial Ecosystem develops an industrial web to control sustainability of Earth concept and many changes in industrial systems to decrease the pollution.

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