Introduction

Climate change is not the problem of particular country/region. It is the global issue. This has been addressing by experts and world leaders time to time at conferences and meetings but no proper action/solution has been practically taken yet to overcome this issue. Varying CO_2 and Green House Gas (GHG) emission from country to country and resistance to change from developed countries are the reasons not to formulate standard policy and regulation under common goal. The impact of climate change is the recent issue on business as well as global economy. For the business community, climate change represents an impending market shift - one that will both alter markets and creates new one. New competitive environments produce risks and opportunities, as well as winners and losers.

The purpose of the article is to make awareness among the people and educate them towards the common goal that is the reduction of carbon dioxide (CO_2) and Green House Gas (GHG) emission in the atmosphere. In addition to that top five of the green countries' practices to protect the environment are discussed in details. In further, this article seeks to explain identified various business frame works that can be and are being used to link climate change to business interest and some specific ways in which companies synergically integrating climate change and business strategy to contribute to the bottom line.

Climate Change

Climate change varies from country to country and region to region and also it may be limited to a specific region or may occur across the whole Earth. This naturally maintains on Earth through balancing the carbon in the atmosphere. Climate change is a change in the statistical distribution of weather over period of time. It can be a change in the average weather or a change in the distribution of weather events around an average.

In recent times, the climate change usually refers to changes in modern climate. It may be qualified as anthropogenic climate change, more generally known as "global warming" or "anthropogenic global warming" (AGW).

The climate change occurs systematically and periodically on the Earth. The major factor influence on climate change is the maintenance of natural carbon balance in the atmosphere. As usual practice, the Earth maintains a natural carbon balance. When the concentrations of carbon dioxide (CO_2) are upset or disorder, the systems of carbon cycle gradually returns to its natural state. This natural readjustment works slowly, compared to the rapid rate at which humans are moving into the atmosphere by burning fossil fuels. As a result of it, the concentrations of CO_2 in the atmosphere increases. This process leads to the global warming.

The natural carbon balance is maintained by continually exchanges within a closed system consisting of the atmosphere, oceans, biosphere, and landmass. The carbon cycle system works in short- and long–term basis. In short-term cycle, carbon is exchanged rapidly between plants and animals through respiration and photosynthesis, and through gas exchange between the oceans and the atmosphere. In long-term cycle, carbon in the air is combined with water to form weak acid that very slowly dissolve rocks. This carbon is carried to the oceans where some forms coral reefs and shells. These sediments may be moved deep into the earth by drifting continents and eventually released into the atmosphere by volcanoes.

Though plants and animals are participated in

carbon cycle, the humans' participation is also being increased recently through burning coal, oil, and natural gas. Humans are adding carbon dioxide (CO_2) to the atmosphere much faster than the carbon in rocks is released through natural process. And cleaning and burning forests to create agricultural lands converts organic carbon to carbon dioxide gas. This process leads to increase the CO_2 concentration in the atmosphere. The oceans and land plants are absorbing a portion, but not nearly all of the CO_2 added to the atmosphere by humans' activities. It leads to the climate change across the whole Earth.

Impacts of Change

As a result of the increasing CO_2 concentration in the atmosphere, there are possible impacts of global climate change on the Earth. The global warming affects many part of the region on the Earth. The CO_2 and green house gas emission are moving into the atmosphere differ from region to region. A particular region which severely affected that emits the least green house gases. The impact of climate changes is not equally shared among all regions. This is the current issue faced by the world leaders not to take any decision or to form policy & regulation to overcome this issue. There are winners and losers, even within a single region. There are few of possible impacts of climate changes on Sea Level Rise, Water Resources, Traditional Culture, Health & Disease, Agriculture, and Ecosystems.

Sea Level Rise

Sea level rising is a major issue in the current environmental context. As a result of rising sea level, the impacts include loss of coastal ecosystems, flooding of cities, displacement of coastal inhabitants, and increased vulnerability to storm surges. The sea level is projected to rise in future, if the concentrations of CO_2 continue to increasing in the atmosphere. The oceans cover 71% of the Earth's surface. It is the negative sign for the climate change impacts on the Earth. In order to face this challenge, the wealthy countries/developed countries like United States of America will be able to manage to sea level rise than developing countries that are having lack of resources, and infrastructure facilities.

Water Resources

The impact of climate change on water resources is another global warming issue on the Earth. Water resource is most important for human life. Due to the global warming, the peoples who live in the western United States are facing similar water shortage. Mostly, the region which relies on the river for fresh water supply could face this kind of problem due to the decreasing snow pack in the high mountains. It is also the threat to the peoples in the southwestern U.S. The main reason of the water shortage is the disappearing of Glaciers on the mountain. The Glaciers are moving away from the mountain due to the increasing temperature in the atmosphere.

Traditional Culture

The impacts of climate change will be threatened the traditional culture on the Earth. There is a possible way the traditional culture to move away from the Earth due to the increasing temperature. The temperature and weather condition are felt and varied region to region and also the wildlife from region to region has different behavior and attitude. Due to the global warming, there is a chance for disappearing Ice Packs, decreasing livestock farming, and leading to have limited resources in the environment. The farmers depend on the climate variations to cultivate and harvesting crop. When the climate and its temperature change, it will affect their cultivation as well as farming business and also the life of inhabitants.

Heath and Disease

Due to the global warming, peoples from various regions face lots of problem such as water shortage, lack of foods availability, infectious diseases, and increasing air pollution. People mostly familiar with the current climate and temperature on the Earth, when it comes to change suddenly, it leads to the health problems and disease. Sometimes, during the warmer, wetter weather, it could increase the spread of malaria, dengue fever, and yellow fever. In further, as result of increasing temperature and green house gas

emission. Ozone damages lung tissue and also it is harmful to people with asthma and other lung condition.

Agriculture

The economic growth of the country relies on agriculture and farming. The impacts of climate change on agriculture will be affected the economic growth of the country. But this impact differs from region to region as a result of modern advanced technology. Agriculture is affected in developing countries due to the climate changes than the wealthy countries such as U.S.A. In U.S.A, the farmers are well adapted to the climate change and used advanced technology in their cultivation and harvesting but other regions are isolated from this facilities and having lack of infrastructure due to the increased in population. As a result of increasing CO_2, it may help plants to grow but it requires adequate water supply and other fertilizer.

Ecosystems

Peoples are living with nature and the ecosystem is inspired by the humans and animal. Forest is a key place for the wildlife and eco tourism. Due to the increased in temperature and deforestation for the purpose of agriculture and farming, the ecosystems are moving away from the environment. Birds and animals are moving away from region to region and some are died without proper place and climate on the Earth to live. The birds migrate to other places where it can be lived. The recent survey indicates that Adelie penguin population decreased 22% during the last 25 years, while Chinstrap Penguins increased by 400%. These two are having different habitats for survival on the Earth. The Adelie needs winter ice packs where Chinstrap habitats with open water. It seems to us that the receding ice pack is reflected in their changing population. It is also estimated and analyzed that the number of Bengal Tigers is projected to reduce in Bangladesh as a result of rising sea levels and deforestation and it is started to migrate into the village and would be blocked the humans.

Responses to Change

The positive responses from personal and national level are most important to overcome the global warming issue as the humans are moving more CO_2 into the atmosphere. It is very difficult to predict the future societal changes. Changes on population, culture, needs of the human are very difficult to assess and predict. It is the challenge of policy makers to predict the possible changes in the region. Through making awareness, and educating the people, it is possible to make policy to reduce CO_2 emission in the atmosphere. It is believed that full of implementation of the Kyoto Protocol would reduce CO_2 emission by about 8% in 2010 compared to business.

It is necessary to establish global CO_2 emission calculator to assess the CO_2 emission from region to region as it varies time to time. A particular methods and tools are needed to be carefully considered to create fair and effective policy. For international response to climate change warning, individual and national should take responsibility to reduce CO_2 emission as it is not having standard policy.

Considering alternative ways to response the global warming is most vital role of individual in an organization. Using advanced technology and exchanging carbon set-off systems will help to balance the CO_2 in the atmosphere. The policy has to be created and implemented the systems of carbon trading and carbon footprint methods worldwide. Even it is cost for the organization but benefit for the environment.

Five of the greenest countries in the world are selected that are virtually unpolluted environment. The countries are Iceland, Switzerland, Costa Rica, Sweden and Norway. The practice, systems, and policy of these countries are mostly attracted to the environment and prevent from pollution. The intention for change, support from the people, and standard policy of the government are the primary reasons to overcome the issue. Iceland is the first country who eliminates the need to burn something to get warm.

No heat in this country plenty, despite the cold climate. The government of Iceland encourages the people to use green technology and also they did not get resistant from the people. They have reduced the usage of coal and oil and using alternative ways for energy consumption.

Switzerland is captured second place for unpolluted environment. The country was rated as the cleanest country in 2008. The government of Switzerland is always working closely to convert the country to stay clean "green country" and also participating to reduce the CO_2 emission in the atmosphere. The government promotes the organization to use green technology and systems in place such as Hotel sectors, they provide discount for the visitors who come by hybrid cars to the hotels.

The third country is registered that is Costa Rica. This country is presently working on the conservation of virgin forests and biodiversity. The country works with the vision is to be a zero emission of industrial carbon dioxide in 2021. In order to achieve the vision, the government of Costa Rica encourages the people to use alternative energy sources and implementing already existing in the industry.

Fuel crisis was affected the Sweden hardly. The country focused an alternative energy sources from river, wind and sun. They are working with vision that is to transfer all houses on the fuel-free mode. This is not the reason to get rid of all heating and gas but also gradually shifting to renewable energy sources. In addition, Sweden is gradually transferred to the use of biogas in vehicles instead of the normal methane.

In final, Norway, the country will become with virtually no industrial emission of CO_2. The country has been taking steps to reduce carbon dioxide emission in the atmosphere. To achieve this, the government makes the purchase of related equipment and technologies and also plants are under way to reduce carbon dioxide emission by 40%. The country has formulated a policy that those motorists who have car with engine on diesel fuel, should pay more. In addition, Norway paves the additional railway line to save the inhabitants of the country from having to travel by car over long distances.

Business Strategy for Climate Change

In the current environmental context, the climate change is a major issue faced by developed & developing countries. The carbon emission into the atmosphere comes from a variety of sources – power generation, transportation, agriculture and land use, manufacturing, and other activities. Apart from the humans' participation on moving CO_2, the business industries take major part in causing climate change whilst contributing country's economic growth. As a result of the business development and expansion, the demand for energy will increase substantially over the next 25 years. It is the threat for the environment in future. When formulating strategy, it is the core area to be included in the strategic plan to protect the environment without undermining the growth of the global economy.

A recent survey of global executives, conducted by the Mckinsey regarding the climate change, shows that a strategic planning on climate change is important but majority of the managers consider that it is important to product development, investment planning, and brand management. In further, it reveals that 1/3 of the executives say that they never consider climate change as subject when they develop overall strategy and 82% of the participant expects regulations in the country to protect the environment. And there is no awareness among the employees, and executives in the organization regarding the climate change.

In fact, it is the time to make strategy to reduce the emission whilst protecting companies' investment. Many companies are having strategic plan to protect the environment but other companies, particularly in the United States, continually resist and deride their proactive competitors. Even though having such resistance, in order to reduce GHG

emission, all companies should voluntarily follow a base model within the following general frame works, (1) operational improvement, (2) anticipating and influencing regulation, (3) improving risk management, (4) identify new market opportunity and (5) enhancing human resource management.

Operational Improvement

It is one of the frame works that companies can work to reduce the GHG emission. It relates with the process optimization, such as lower energy costs, reduces material utilization rate, minimized emissions and decreased cost of transportation. The operational improvement benefits for protecting environment whilst reducing cost of the operation of the company. It is important to understand the energy efficiency of the operation and to plan the method to improve it. Companies should set a mechanism and method to measure its production of carbon dioxide emission and other green house gases (methane, nitrous oxide, hydro fluorocarbons, perfluorcarbons and sulfur hexafluoride) and setting strategic plan and vision to reduce the emission for every year through using available technologies or alternatives for reducing emission and the cost/benefits trade-off associated with each.

Anticipating and Influencing Climate Change Regulation

Companies must be aware of the developments in policy & regulation standard at the international, national and regional level. According to the standard, company must prepare and response to the changes and also they should assess whether they can influence on those standard. It is most important to monitor & forecast the development of GHG emission policy & regulation in future. It is vital to companies to understand and support to the policies and follow up them to protect the environment.

Improving Risk Management

In the strategic frame works of risk management, green house gas reduction can reduce financial risks. Due to the climate change, there are trillion of corporate assets are threatened. The risks come from uncertainty such as physical (the results of droughts, floods and hurricanes) and financial (the effect of GHG liabilities on share price and assets valuation). It is important for organization to evaluate and assess the risk and take precaution action to avoid it.

Identify New Market Opportunity

Climate change creates new market shift, and new opportunities in the business context and it directs new investment strategy. In the 1980s alone, computers eliminated the typewriter industry, compact disc replaced phonograph records, and the Bell systems demise wrought structural changes in telecommunications. New competitive environment produce both risk and opportunities.

Enhancing Human Resource Management

In addition to the technology and systems to reduce the emission, the engagement of the work force is important for an organization to implement the climate change strategy and regulation. The implication of climate change in an organization involves both quantifiable and non-quantifiable benefits. The implementation of strategy to reduce emission requires changes in company's structure and the culture of the organization. These systems and procedures for emission reduction include reward systems, training programs, management philosophy, employee involvement, reporting requirement, data collection and analysis. In all of these and more, companies must engage employee as partner in strategic decision and implementation of reducing GHG emission.

Several companies in the business world today have history of experience in working with climate change issue. These companies are seeking new market opportunity whilst focusing on fundamental technology shifts. Dupont, for example, it has identified the most growth markets in the use of biomass feed stocks. And also as a result of having joint venture agreement between Dupont and Tate & Lyle Plc, the use of bio based method consumes less energy, reduces emissions, and employs renewable resources instead of traditional petrochemical process.

In recent, United Nations Environment Program (UNEP) worked with India Premier League (IPL) to make awareness among the cricket fans to protect the environment. IPL committee took advantage of this event and provided continuous support to UNEP to save energy, water and lessen waste from the matches. Further, they cover all elements and operations that contribute to the enjoyment of game including stadium lights, transport and refreshments. UNEP advised the IPL to calculate the carbon footprint which means the green house gas emission and then looking at how to reduce them.

They worked with vision that is to go "climate neutral" meaning that cricket matches will have a neutral effect on the climate. In order to compensate the gas emission, they took decision to set-off by investment in climate protection projects such as to ensure that any new cricket stadiums in India are built to sustainable standards, team captains should take a pledge to reduce their teams' environmental impact a critical act during 2010 which is declared the UN Internal Year of Biodiversity and all players, sponsors and partners should be more mind full of their foot print. They appointed Sachin Tendulkar a UNEP goodwill ambassador and also every one took part to take positive steps to protect the environment. In order to make awareness about the climate change, they displayed few fun environmental ideas and facts around the stadium such as use public transport for a game or share a car with neighbor/friend, keep your city and locally clean, unplug or shut off appliances when you go to a game and harvest rain water.

Conclusion

Climate change issue is man made on the Earth. The Earth maintains its carbon balance naturally but due to the humans' activities, the concentrations of CO2 and its balance are upset and it leads to the global warming. The impacts of the climate changes are experienced by the whole world but the CO_2 emission vary from region to region and some countries emit the least greenhouse gases. To overcoming this issue, it is most important to make awareness about this problem among the people and obtain their contribution and support towards common goals. Setting policy frame work and regulation and emission profile in every countries are the vital role to be played by the world leaders, even developed and developing countries. Later on, understanding possible policy and then trying to influence by policy formation is the bottom line to be followed in future. In the end, ultimate responsibility in providing solution for this issue should be taken by individual, business sectors and national level. The government should form policy and regulation and set up standard mechanism to calculate carbon footprint and carbon trading systems to set-off carbon footprint country to country. In this way, it is easy to identify the countries that emit the least greenhouse gases and at same time the countries that emit maximum greenhouse gases in the atmosphere. And also identify the possible and alternative ways to eliminate this issue and this will be the based model to formulate standard policy worldwide but still there is a resistance from developed countries.

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