

Investigation on Reasons and Consequences of Climate Changes in International Systems

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Abstract: Stepping to second decade of third millennium makes more complex and various international systems. While time passes, three main elements of ending civil war as globalization, weakness of system and development make main changes in international systems. So, biological crisis is known as main issue of political and international topics, climate changes contain important position; because paying attention to biological matters and changes of low politics position to high positions are known as important and clear matters of universal treatments. Therefore, importance of unpleasant climate consequences derived from green-house gases; the earth warming, increasing of sea levels, decreasing of biological varieties, flooding, drought, destroying the land, insecurity of good, political and social discussions, development of poverty clear new aspects and topics in international crisis and solutions. Present study tried to use descriptive analysis and librarian method to study and answer the question why climate changes make more technical and ecological challenges in various relationships of countries. In addition, they have been tried to clear most important consequences and reasons of climate changes as green house effects in international system.

Key words: Climate changes • Green house gases • Global warming consequences • Flooding • Drought • Pollution

INTRODUCTION

Biological challenges are important matters of climate changes at first of 21st century. International system relates deeply to climate changes. It is result of globalization and security, cooperative and benefits changes; on the other hand, presenting some questions as role of governments and international organizations in biological policies make different international regimes and development of international rights into new place to test international relationship theoretically.

So, climate changes have been changed to important title in diplomacy and foreign policy of countries, from Tokyo to Copenhagen. The article studied important climate changes in international systems and earth warming besides studying green house gases and industrial development and consequences of climate changes in international area; the elements which influence on human safety and life. So, the mentioned

reasons made the researcher to study and gather enough information by using descriptive-analysis and librarian methods to mention the necessity of the some elements in changing climate such as green house effects and globalization to present more information to researchers who are interested in the materials. In the librarian method, researchers usually find enough information by studying the others researches and studies.

Climate Changes: Earth is warming. In past decade, only researcher thought about it but now researchers know about the future. Northern Americans experience ice disappearing, death of polar bears. Resulted of hungry and unusual immigration of whales; nomadic of Latin America to Eastern South of Asia understand stores, earthquakes and floods, Europeans feel it in disappearing of natural Alp freezers, drought of Mediterranean and fatal stones; researcher observes them in many things as trunks, sediments, corals, remained bubbles in ice which clear that today universal faces to treatment [1].

Climate: Climate refers to aqua or terrestrial atmosphere of seasonal or time conditions, climate usually is cleared by changes of temperature, atmosphere, raining, winding, humidity, cloudy, soil, humidity, sea temperature, viscosity and thicken of ice layers in the sea. The condition shows climate with other measurements as lowest daily temperature, cultivation and season length or flood water in long period of time. Climate and its changes are presented universally. They make regional or local temperatures which are far from universal believes which make high increase or decrease of climate changes in various parts [2].

Climate Changes: Explanation of climate changes refers to every climate changes, even if the changes made by human activities or natural changes, the explanation of climate changes could contain the following words: changes in climate made by humans and changes universal atmospheres directly or indirectly, the natural change or effect separate of natural determination in observation in same period of time [3, 4].

Climate changes are natural phenomenon happened in thousands years, but climate changes recently face to more changes than previous years; there have been many tries about analyzing climate and universal warming caused by spending fossils fuels, releasing of green house gases and pollution since 150 years ago.

Starting of industrial revolution in 1830 and growth of human developments made various changes in human life. Need of energy and spending fossil fuels as coal, natural oil and gases make high development of some materials as CO₂ and vapor of H₂O in the atmosphere. Climate changes is result of increasing green house gases as clear danger of industrialization; green house gases in atmosphere changes energy balances on the earth.

Green House Effect: Many researchers believe that green house effect makes earth warming; presentation of green house is essential on the world, physicians believe that definite gases in the atmospheres keep reflected warm weather of earth surface and prevents their releasing into atmosphere, some parts of it has been kept by green house gases as CO₂, absorbed radiation of green house gases of the deeper level receives to freeze degree but speed of the gases in the atmosphere resulted of automobile pollution, factories are too much and make increase of green house and temperature [1].

[5] is known for his researches on warming theory, he was the first person who used green house expression to keep warming in the earth, in 1849 [6] calculated that industrialization increases gases crisis.

Developing of Green House Gases and Industry:

Developing of green house gases contain direct relationship to industrial development. Various countries were forced to economical and industrial development to increase green house gases. Based on present documents of industrial revolution to 1980, annual mean of earth temperature was negative but contained ascended development but opposite of it in 1860. During the 140 years, earth temperature become warmer, also 50% of its rapid growth was in recent 20 years. Various regions and countries do not have the same positions. According to world resource institutions, countries and U.S.A contained the below 30.3% showed the highest temperature and then Western Europe showed 27.7%, countries belong to previous Russia contained 13.7%, China and India and developing countries of Eastern South of Asia 12/2%, Southern and Central America 38%, Japan 3.7%, Middle East 2.6%, Canada 2.3% and Australia 1.1. Based on developed and industrial countries 78.7 and developing countries contain more population and make about 21.2% of earth warming [7]. In 2008, U.S Department of Energy and 16 developing and developed countries contained the most role of releasing CO₂ in the world; U.S with 23 percent of CO₂ was in the first ranking level in terms of CO₂ generation.

Russia with 1.3 of U.S was in the third position. Table 2 showed amount of energy [8]. Some new developed countries as China played important role.

In order to receive to correct judgment, the information is not enough and may contain incorrect results. Data of Table 2 is based on CO₂ of every country. In this table, China and India contain the highest population; Canada and South Africa contain the lowest population. It means that although China contained second level in producing CO₂, its population equals to 14 percent of their countries except India. Table 3 shows the CO₂ and population to clear the amount of gases by each country. Also in a column there is international gases production of 16 countries.

Table 2 showed that calculation of annual CO₂ plays important role in categorization of countries, U.S.A contained its position. It means that everyone produces more CO₂ than others in other countries. In contrary information stated in Table 2, developing countries are in the below positions of the table. It means that every one in the developing countries (Mexico, China, India and Indonesia) contain the lowest parts in producing CO₂. It was observed that developed countries are in top levels of the table. In order to clear the relationship between economical abilities of countries of CO₂ gases, studying correlation of related data in internal gross productions is

Table 1: Summary of green house gases problem [4]

Green house gases	Artificial sources	Natural sources	Soak away pit	Length of life in each atmosphere
CO ₂	Fossil fuel burning, deforestation, fermentation of solid and liquid damaged -		Oceans Jungles	50 years
CH ₄	Animal waste matter, rice paddy, burning fossil fuels, fermentation of soil and liquid damage	Oceans and lakes	Absorbs by present bacteria in soil and chemical reactions in atmosphere	10 year
NO ₂	Rich soil with chemical materials, burning of fossil fuels	Microbe process in soil and oceans and natural soil	Absorbs photo chemical reactions in atmosphere	140-190 years
O ₃		Complicated reactions in atmosphere	Reactions with free radical in atmosphere and complicated real photo chemical	Some hours or days

Table 2: Amount of Co2 gas in different countries

Number	Countries	CO ₂ Million tons	CO ₂ ,%	Amount of gas, %
1	All the world	6,173	100	100
2	U.S	1,407	23	23
3	China	871	14	37
4	Russia	496	8	45
5	Japan	308	5	50
6	India	248	4	54
7	Germany	228	4	58
8	Ukraine	148	2	60
9	Canada	120	2	62
10	Italy	119	2	64
11	South Korea	112	2	66
12	Mexico	102	2	67
13	France	98	2	69
14	Poland	93	1	70
15	South Africa	92	1	72
16	Indonesia	83	1	73

necessary. Almost there is positive and direct relationship between CO₂ and internal gross production of countries; it means that every country contained higher and stronger economics generate more CO₂. In other word, the countries with powerful economy could decrease CO₂ but some countries as India, China, Indonesia and Mexico could not because they contain lower production of CO₂ is based on primary needs of the countries as big industrial countries, producing CO₂ is not one of their essential needs. There is almost direct and positive relationship between CO₂ and internal gross products on investment of countries; it means that more powerful economy generate more CO₂. In the other word, the countries contained powerful economy and could reduce CO₂ but some countries as India, China, Indonesia and Mexico can not expect it easily because firstly production of CO₂ is very low; as big industrial countries CO₂ production is out of their primary needs and it is only luxurious truth. Undoubtedly presenting CO₂ in Indonesia resulted of agricultural activities as in U.S.A the activities of CO₂ are known as funny and unessential works [4].

In the past, it was supposed that the earth contains fixed condition and system of earth activities are formed in unit automatic system, biosphere and geo-sphere made a unit. In the theory, earth works as live creation and mechanism of system makes the earth safe place to live. But one dimensional role of production does not make earth as unlimited place; the earth lost its automation [9].

[9] presented that earth lost its automation and made chain reactions suddenly resulted unpredictable and dangerous truth. The earth moves to new conditions as 55 millions years ago, climate becomes warm and makes life harder [8]. So, it is clear that participation of country in producing CO₂ shows their activities in destroying the automation and natural process of the earth and the matter is more than warming the earth.

The Role of New Powers in Green House Gases: Review of published statistical information of great increase of the role of the developing countries and especially new powers are important in production and presentation of green house gases; based on department report of

Germany until 2007, America was known as the most polluted country. But since 2007 China became first and saves its position. So, CO₂ in all over the world since 1990 until 2007 increased from 21 to 29 billion tones and China took the responsibility of more than half of it. Besides China, some other countries which produce more CO₂ reduced its CO₂ after its collapse; as 4 other countries since 1990 increased its CO₂ to 3.1590 percent.

On the other hand, published table of international agency since 1990 until 2007 in Iran contained the highest position of CO₂ production after China. During the years, CO₂ in Iran increased to 8.165. Also increase of production in Iran among 10 mentioned countries after China was 6.103 percent Iran in 1990 produced 175 million tones of CO₂ as it has increased to 466 million tons in 2007. In fact, Iran is the 5th developing country which pollutes the world [10].

Consequences of Climate Changes: Scientists believe that present climate changes until next 10 or 20 years make non-returnable condition and its signs now are observable. Charity organization of Oxfam represented that happening of natural disasters increased to 4 times more than before, warming of the world is main reason of them; according to French news Oxfam reported that increase of green house gases relates to climate changes. So, the world at first of 1980 experienced 120 natural accidents and now it received to 500 disasters in a year [11] has presented that 2007 experienced flood in south of Asia, in Africa and Mexico, more than 250000 members injured. Also [12] has added that now we are more ready to natural disasters; because humanistic activities would be disappeared and human development would be destroyed. Last 60 numbers of floods and storms in 1980 received to 240 cases, the number of flood increased 4 times. In 2004 tsunami shake Indian Ocean with earth quick and killed 230000 members in beach. In 2005, heavy storm of Katrina Hurricane killed 16000 persons. In 2008, sudden storm of Myanmar has killed 30000 persons. All of them only are examples of the accidents most probably occurred due to global warming [10].

Earth warming also makes disappearing of Ozone layer, creations, various kinds of technology, acid raining, jungle, raining jungle, wet lands and lakes; also, it destroys soil, making desert, flood, storm, drought, lake, river, pollutions, using more than usual underground water, melting of polar ice, increase the levels of seas, disappearing rocks and development of diseases.

Increasing the temperature of earth forces many creations change their routines and many of them disappeared. In 21st century, it makes disappearing of creatures such as 50% of plants and animals as polar bear, penguin and polar fox [13].

The main consequences of earth warming could contain unusual results as the below categorization:

Increase of sea levels; in the last 100 years, the level of sea has increased from 10 to 25 centimeters; based on previous data results it will receive to 13 to 94 centimeters until 2100. A result of the increase of sea level is presentation of salt in beaches. Warming increases the sea level resulted melting regional fridges. IPCC estimated that until 2030, the average of sea receives to 18 cm higher than present level. The increase of sea levels made serious problems in banks. Countries contained lower level of sea as Poland will need more accurate activities because the level of their sea will doubled. Increase of sea level made underground water to become salty. Some small islands with low height of sea level are more in danger of climate changes [14].

Lack of soft water; affects of climate (as changing of temperature, raining and sea levels) influence variously on soft water in all over the world. Increasing the level of oceans resulted of melting polar fridges not only lost some beaches but also entry of salt water sources made lose of valuable sources and make problems in providing suitable water [15].

Development of drought; as warming of world changes oceans level and melts ices influence on lands. The high level of temperature vapors wetness of soil and made crisis. Warming and dry could kill various kinds of plants and animals [14]. The most important danger to agriculture is increase of drought made high temperature. Decrease of raining makes changes in recycle patterns and high vapor of high temperature will make more droughts to plant seeds in many areas. The mentioned elements make problems in WTO and presentation of food in Russia and many third world countries is the most services and main problem [16]; so, 2006 was called fighting to decrease the amount of desert by international organization. Its aim is pictorial image of public people and lives in dry lands and their fights are in front of desert development.

Diseases development; transformation of many diseases happened by climate affects. Presentation of new diseases and increase of them and increase of insects happen in warm weather. Creation are sensitive to

temperature, water, wetness, change, jungle development and etc. there are important for transferring diseases; so, it is predicted that climate changes and affective patterns of atmosphere influence on diseases like Malaria [17].

Poverty development; the study relationship between poverty and climate changes presented by international organization. The report showed affects of climate changes on poverty and its root in 3rd thousand plans. According to the report, climate changes made more balanced increase in developed and developing worlds and also climate changes are known as serious danger to reduce the poverty. Based on IPCC 2001, it is predicted that the developing countries experienced negative affects; its reason is more sensitive situation of economical activities in the country; because more economical activities happened in agricultural and fishing fields and climate changes of the parts; it is predicted that climate changes in developing countries directly or indirectly make more disturbance.

For instance, Bangladesh with high risks, deep beach, large amount of population and dependant economy to agriculture based on climate changes as storm and flood and on the other hand increase the sea level lost most of his lands. In 1979 until 1998, the country experienced 7 big floods derived climate changes. In 1998, 68% of agricultural and non-cultural lands and 30 millions people damaged in flood and 918 persons lost their life. Economy of Bangladesh damaged 3/3 million dollars, the number equals to 8% of internal gross of country. In Ecuador between 1997 and 1998 lots of agricultural and fishing parts damaged and about 4.7% of agriculture destroyed and people force to sell their invaluable assets as agricultural roots to live based on lack of water in warming earth, it is predicted that 40% of the most poor countries lost 10 to 20% of their abilities in agriculture. In Africa and Latin America, the products depend on raining are in highest level of warming and may decrease the efficiency of agriculture to 3%. Based on studies, increase of temperature in India was between 2 to 3.5 centigrade lost 9 to 25% of agricultural salaries [18].

Increase of sea levels makes high degree to economy of developing countries. It is estimated that increase of 1.5 to 4.5 centigrade in the earth, sea level increases among 15 - 96 centigrade; increase of sea level is dangerous for all areas because firstly not only fertile lands soak in water but also salt of sea water remained colorfully in land and their incomes reduced. On the other hand, penetrating of salt water to soft water as vital source is disappeared. Damaged areas to increase of sea level of them contain tropical areas as western beach of Africa, Northern beach,

Southern America, Southern and Eastern south Asia and small islands in Karees Sea, Aram Ocean and India that usually are known as poor area and agricultural economy. As result, disappearing of agriculture in the area makes immigration of residents to other areas and the element increased the poverty; people who immigrate only left the land and went to other countries.

Climate and Security Changes: Changes the concept of security and economical positions

Force plays important role in security. Changes of national security to national army are result of international relationship and power in political system which equals to money role in economy; during the time; meaning of national security faces to changes, in bipolar period, universal thought accepted the security concept in bipolar universe. But, its collapse changes army system to economical competition and national security parallels to international affairs. Today, economical security makes securities of countries. A country becomes powerful when it would able to power its agents socially.

Now, non-army elements made serious treatments as new challenges in the countries. The most important treat is unlimited social development, race problems, terrorism, religion exaggeration, organized problems and biological crisis [18].

So, international security controls national security. It means that security of a country nears to another, none government could only think about its security countries depend on each other. Although providing security of countries contained high value, various dimensions of security is in nuclear concept. The changes of the last decade of 20th century showed that army plays important role in international affairs, but drought presents as important factor. Green house gases and ecological pollutions showed unsuitable image of international economy. Presentation of new treats as earth warming changes the meaning of national security. If it means safe position, present security does not contain army matters. If security means developed from healthy position, it means that large amount of people clearly live in lack of security [19].

Two aspects of ecological securities

There are aspects of ecological securities; one is description of ecological securities is destroy of ecology and decrease of sources and negative influence on security of a country. Changes of ecology can be the center of problems as soft water and nutritional sources. One description of ecological security based on ecological problems as warming green house gases,

holding in Ozone layer. Acid raining, destroy of jungle and agricultural lands could contain unsuitable consequences and made economical standstill, social strike and political instability; the influences could make problems in country or out of it and damage the security of country. Paying attention to security of a country relates to traditional ideas, as most part of international studies and is main part of national and international securities.

The second description relates to ecological changes and its affects on individual security it means that some parts of activities in country are in correct; because ecological problems do not limit to political barriers. Ecological problems treat people without paying attention to the place; analyzers who believe the second description accept national security as large as economical situations of individual and society.

Another aspect in the description is destroyed of ecology as a treat which should be controlled sooner. It is imposed that its summary shows that the security derived unsuitable situation of ecology which is different from its nature. So, the description of security with ecological treat is unsuitable [18].

Affect of climate changes on international security; based on traditional views, security is explained in the absence of danger and nature would be evaluated by the presentation of human. The results of the above showed that danger of nature operations is in the higher position. Although new materials criticized the idea and believed that nature would able to repair it automatically [19] but now condition of earth presented the new aspects to the first group. Climate changes in 21st century influenced on universal security, climate changes are new style of new treats of developed, developing and undeveloped countries. Earth warming is known as sample of national security of countries; some researchers believe that there are most important factors in 21st century.

The difference is that ecological treats do not limit to political barriers; mostly there are internationally. The problem forms important element that security would not be accessible only by a country. [19] showed that sudden changes of climate could limit to instable potential in geopolitics of environment and make wars in regions. Lack of food resulted of universal agricultural production, decrease of quality and accessibility to soft water in impartment parts of world resulted change in raining patterns, repeated drought and problems in accessibility to sources of energy could reduce the production and made insecurity.

Report of Union Organization of ecological programs showed that all emergency needs to humanistic helps in 2007; except one, resulted of climate changes; so access to development goals is dangerous. The results showed that until 2050 if the amount of green house gases reduced to half, temperature of earth will increase more than 2°C. Climate changes make lack of stability [20]. The director of Union Organization visited South Pole to observe affects of earth warming. South people lost 90% of its ice and the wild world is in danger [20].

Affects of the changes make short and long time treats to human securities and increase of aspects of serious changes in atmosphere influenced on abilities of ecosystem in production of goods and services. Increasing the level of sea in small islands, Delta areas and beach plants are treats. Lack of sources, makes instability in some areas and many unsuitable relationship and negative affects as compulsory immigration. Destructive natural disaster and ecological crisis killed humans, destroyed economical activities. As elements as development of desert, decrease of jungles, decrease of sea animals, air pollution and high changes of climate treat life of human and other creations, they need safe position to suitable solution [21].

Globalization and Climate Changes: Globalization in recent decades prepares suitable situation and powerful motivation to study and analysis of the phenomenon. Today, economist, sociologists and political researchers think about the various dimensions of globalization.

Globalization in many countries made industrial development and increase of salary also it reinforced competition and more use; also all of them are known as potential treatments to the environment [17].

Study the subject shows especial review of changes as national benefit and control by globalization in study of climate changes and increase of important green house gases; so, it is clear that ecology changes to global topic, why some ecological matters naturally are globalization, facing to the fact is only available by accompany of international ecological matters; it means that if totally it would not be globally, nature passes the national borders, the matter also accompanies with political challenges with globalization, therefore, processes made more use of sources and climate changes basically relates to more developed political, economical and social processes. Globalization and its mutual processes in economical scope or other parts of life made incensement to ecological topics [21].

The Rules of Globalization to Climate Changes Crisis and Ecological Democracy:

Globalization in many countries mainly made more salary and reinforce competition in economical and trading parts. More use of materials in globalization is serious treat to pollution of ecology, it makes some countries to decrease their ecological desires to receive to more scores and standards; as some countries; especially the developing countries prefer to accept some polluted ecological industry while developed countries prefer to compensate the ecological conditions; so, the developing countries face to some destroying factors.

Some believe that development makes ecological systems worse and worst but at last increase of government and people salaries could decrease the destroying condition [20]. Although evidences are different and they show that they make destroy and bad affect, they contain short time affects developing countries which is completely pessimistic.

New powers recently increase their industrial production; the topic increases their shares in pollution of industrialization [22]. Activities of political affairs in developing countries make more hardness by their presentation in the countries as developing countries face to many vast problems to adjust affective rules on ecology and some governments contain financial and formal capacities in the policies.

There are many evidences that we face to a developing international structure to control ecological crisis, one of them is presentation of ecological democracy in the countries. Also, sometime the government could not solve all problems of the countries; some countries which contain deep democracy, some subjects attract them more than others [23].

While ecological subjects sometimes could not be controlled by the government, who believed to ecological democracy wants more knowledge and accompany of more people to compensate ecological condition of the country. So, they believe that making decision to increase ecological condition of country would be made by governmental international organizations in non-democratic environments, one effective solution is lack of accompany of citizens and civil social agents especially non-governments organization in natural process and knowledge which made together the main concept of ecological democracy.

The suggestion is preparing some works to accompany with non-governmental organizations. Support of civil society in international societies and making the suggested process formal and use capacities of international unions to protect nature [23].

CONCLUSIONS

The world is in the situation which is called overshoot and collapse, the difficult situation makes ecology to challenging discussions in international scope, as international ecological subjects as warming earth and climate changes make important challenges in international relationship. Climate changes and earth warming are the main important elements in the future world, started in first decades of 1970 and 1980 in scientific meetings with the goal of increasing knowledge about green house gases, but unsatisfied endings and its consequences warnings are known as main universal problem.

Earth warming is as the most important factor against national security, many researchers believe that it will be the most important factor is lack of national security in 21st century. Ecological problems such as green house warming, decreases of ozone layer, acid raining, destroying of jungles and agricultural lands could influence shortly and make economical, social and political standstill. The influence could relate and make problems in countries or with other countries.

Changing climate is important factor of foreign political diplomacy. The conditions which clear international discussions, unions, etc. presentation of meaning ecological diplomacy accompany with its development agreements.

Development of related discussions to climate changes made foreign new blocks and help countries to receive to more new blocks and help countries to receive to more new economical and political accompany.

There are many evidences to present developing structure to control ecological crisis, presentation of the meaning of ecological democracy is one of them. As subjects related to ecological systems often faced to lack of attention by politicians.

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