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CLIMATE CHANGE; CONFRONTING OR ADAPTATION?

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Abstract: Climate change, which is accompanied by changes in all aspects of the planet's ecosystems, also affects all aspects of human life, activity and health. Human, who has been the cause of these changes in recent decades, has to adopt effective strategies and approaches to reduce or control these changes to be able to security its sustainable living conditions and the future generations of mankind. There are two basic strategies against climate change for inhabitants of the planet: confronting and adaptation, and the key point here is which of these strategies is more effective? In the category of confronting, there is strategies such as: prevention, emission reduction, purgation and geoengineering; and in the category of adaptation. The goal is the adaptation of different economic, social, etc. sectors to new conditions in order to reduce the damage and hazards of climate change or even use of possible opportunities. In this paper, are studied these two basic strategies and are investigated the disadvantages and capabilities of each in order to adopt a more appropriate strategy.

Keywords: climate change, greenhouse gases, confronting, emission reduction, adaptation, Geo-Engineering

1 INTRODUCTION

The Intergovernmental Panel on Climate Change (IPCC) defines climate change as a change in the weather that can be identified by a change in the mean and / or a change in its characteristics (for example, using statistical tests). Last a long time, usually decades or more (IPCC, 2007). Climate change may be due to natural internal processes or the application of external pressures such as the integration of solar cycles, volcanic eruptions, and continuous human changes in the composition of the atmosphere or land use. What is known today as climate change is due to global warming or global warming, which due to the continuity of the climate system, this warming has affected all different parts and the frequency of the impact and effectiveness of the atmosphere, water sphere, ice sphere And the biosphere has caused each other and has led to severe abnormalities. Greenhouse gases in the atmosphere create a balance in the Earth-Sun energy balance that has made life pos-

sible on Earth (Kweku et al., 2017). What causes the Earth to rise in temperature is due to this imbalance. Thus, in the discussion of global warming, either the amount of energy entering the earth has increased or the amount of energy output has decreased. The study of the amount of energy emitted by the sun indicates its relative stability and even in some areas shows a decreasing trend (Yu et al., 2020). Therefore, it can be said that increasing the concentration of greenhouse gases reduces the amount of energy released from the ground (Olivier et al., 2017).

Although greenhouse gases can also be the result of natural factors, but the comparison of greenhouse gas emissions from human activities and natural factors clearly reveals the role of humans in this field (Ramanathan and Feng, 2009). The modern way of human life, which is associated with the expansion of industry and widespread urbanization, has introduced a huge amount of greenhouse gases into the Earth's atmosphere, which has caused damage to human societies and nature (Fussel, 2007). Article 1 of the United Nations Framework Convention on Climate Change (UNFCCC) attributes climate change directly or indirectly to human activities that have led to an increase in greenhouse gases in the atmosphere through excessive use of fossil fuels. The calculations of the International Climate Change Commission show that if the current trend of fossil fuel use and deforestation is not reversed, the average global temperature will increase by 6 °C in the next century (Denisova et al., 2019). So climate change is happening fast, and the human chance of stopping or slowing it down is diminishing every day. Since Earth is currently the only habitable planet for humans and it is not possible to migrate to a place outside of this planet, so man must do his best to save the Earth. The most important strategies for human beings to get rid of these changes are to cope or adapt. In the field of climate change, tackling means limiting global climate change by reducing greenhouse gas emissions or increasing their clean-up. Countermeasures include reducing emissions, reducing greenhouse gas concentrations, clearing the atmosphere of excess greenhouse gases, and even climate-based or ground-based engineering interventions. It may seem that prevention can also be a good strategy in this regard; but with the sheer volume of releases that have taken place in recent years, this return is virtually impossible. Although efforts have been made in recent years to clean up, the results have not been impressive and human science has not yet been able to carry out this extensive cleanup of the atmosphere. In terms of tackling climate change, reducing greenhouse gas emissions has always been supported and emphasized by many individuals, institutions and even governments around the world. Industrial life and the widespread use of fossil fuels in all aspects of human societies are the first to be blamed for climate change. If the use of these fuels is reduced and the amount of greenhouse gas emissions, which are responsible for human emissions, is reached, to the extent that self-purification occurs in the landmine and the trapping of geothermal heat energy reaches the necessary balance to create a greenhouse effect, human release is possible. There is a global risk of this. The degree of industrialization of countries, population, lifestyle and environmental behavior of citizens determine the amount of greenhouse gas emissions. In the method of dealing with climate change, in addition to experts and politicians who play a key role in managing this

phenomenon, the climate ethics of residents of greenhouse gas emitting countries also plays a key role (Myers, 2014) and this public understanding should be shared by all residents. Create a planet that, if not addressed to this global dilemma, all the inhabitants of the planet will suffer.

Of the more than 200 countries and regions in the world, China and the United States are the largest emitters of carbon dioxide and have a significant impact on the world's climate. They account for 30 to 15 percent of total emissions, according to the International Energy Agency (IEA). In 2019, out of the total amount of 3641 megatons of carbon dioxide in the world, 10175 and 5285 megatons belonged to these two countries. After that, India, Russia, Japan and Iran ranked third to sixth in this publication (GLA, 2019). Industrial life today Human, economic Thinking about reducing emissions and worrying about slowing economic growth among politicians is the biggest obstacle to reducing greenhouse gas emissions. Another strategy in this field is adaptation to climate change, which is generally a set of process, functional and institutional measures in response to the environmental and socio-economic consequences of climate change to increase individual and social capabilities to deal with tensions and seize opportunities. Have defined a new possibility (Esmail Nejad and Pudineh, 2017). Therefore, adaptation is a solution to reduce the losses caused by changes and more on a local scale and in accordance with the environmental conditions of each geographical area, and it is not possible to use a single version for all areas; Because the degree of vulnerability of different regions is not the same and the ecological and socio-economic conditions of different regions are very different from each other. In adaptation, they do not seek to find the root causes of change, but the goal is to find a solution to reduce the damage caused by the phenomenon of change. The purpose of this paper is to compare the two basic strategies for coping with and adapting to climate change in order to gain a better understanding of the right policies to address this global challenge.

2 EVIDENCE OF CLIMATE CHANGE AND ITS CONSEQUENCES

The Earth's average surface temperature is one of the most important indicators of global climate change; because it is related to the energy balance of the planets and also increases almost linearly with increasing greenhouse gas emissions (Rahmstorf et al, 2017). The conservation and accumulation of geothermal energy, which is the result of radiation and solar energy, raises the Earth's temperature and creates global warming. On the other hand, the average surface temperature of the earth is directly related to most of the effects and hazards of climate. Figure 1 shows the temperature fluctuation of the Earth compared to 1880 AD. Although it is possible to study the Earth's temperature over a very long period of time using ancient meteorological methods, since 1880 the measurement of the Earth's temperature using meteorological stations has begun. According to the chart, the Earth's temperature has risen one degree in the last 140 years. This increase, which reflects global warm-

ing, has affected all of the Earth's large-scale systems, causing occasional severe changes and abnormalities in various parts of the globe. A comparison of the amount of carbon dioxide emissions (Figure 2) from fossil fuels and the amount of solar activity (Figure 3) illustrates well the role of humans in the occurrence of climate change. Except for studies of mean temperature fluctuations; Night and day temperature, average and absolute maximum and minimum temperature have also been studied in different parts of the world.

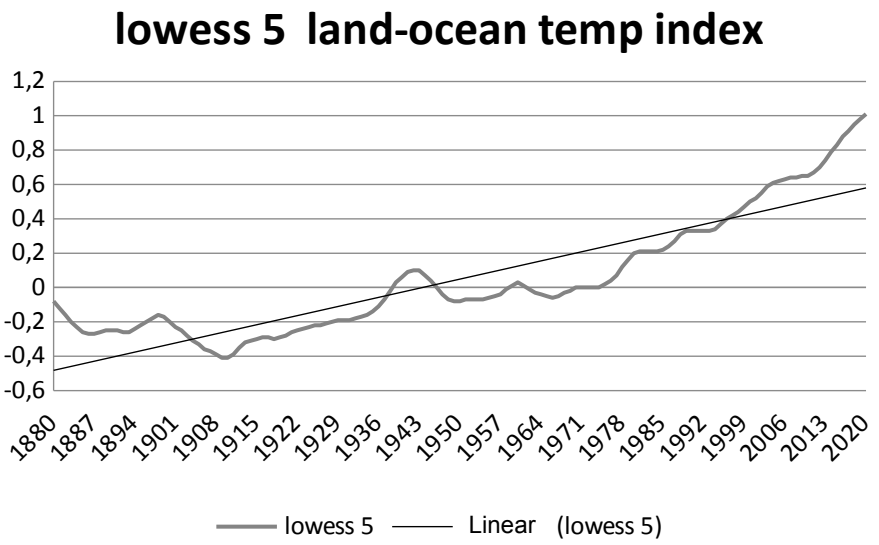

Figure 1 Earth temperature fluctuates compared to the base year of 1880

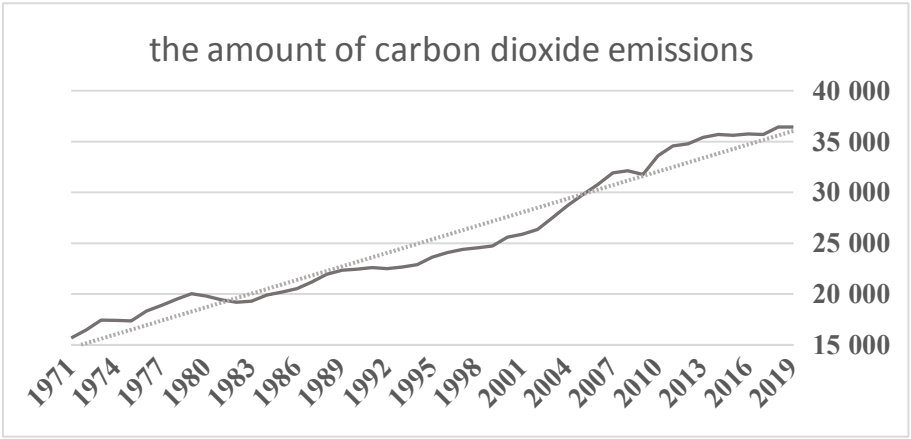

Figure 2 Emissions of carbon dioxide from fossil fuels between 1971 and 2019

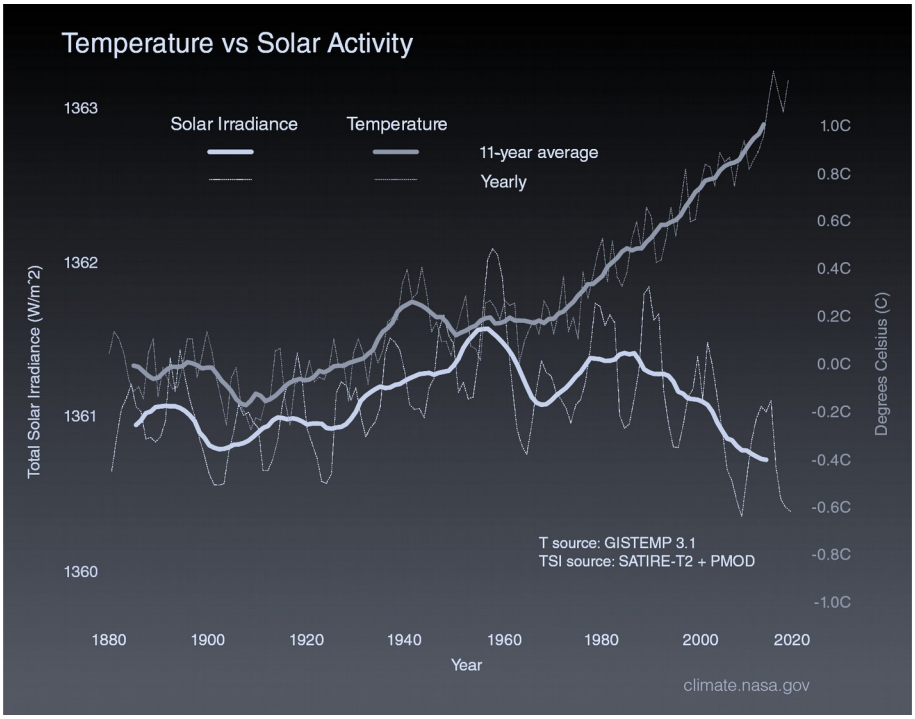

Figure 3 Comparison of solar radiation (yellow curve) and global temperature fluctuation (2020-1880), Source: NASA

3 HISTORY OF MEASURES TAKEN TO REDUCE GREENHOUSE GAS EMISSIONS

Undoubtedly the most important global institution to study, review and report on climate change worldwide is the Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the United Nations Environment Program (UNEP) and The World Meteorological Organization (WMO) and was approved by the UN General Assembly in the same year. The first task of this institution is a comprehensive review and recommendations regarding the knowledge of climate change; its socio-economic implications, and Potential Strategies for Incorporating Possible International Climate Conventions. Over the past 33 years, this organization has produced five assessment reports in five surveys, which is the most comprehensive scientific report on climate change worldwide. It has also published a wide range of methodological reports, special reports and technical articles in response to requests for information on specific scientific and technical issues from the United Nations Framework Convention on Climate Change (UNFCCC), governments and international organizations. The first report (1990) emphasized the importance of climate change as a challenge with global implications and the need for international coope-

ration. The Second Assessment Report (1995) provided important material for governments to use on the eve of the 1997 ratification of the Kyoto Protocol. The Third Assessment Report (2001) focused on the effects of climate change and the need for adaptation. The Fourth Assessment Report (2007) paved the way for the post-Kyoto agreement, focusing on limiting heating to 2° C. The fifth evaluation report, which was finalized between 2013 and 2014, provided scientific information on the Paris Agreement. It is currently preparing special reports, method reports and sixth evaluation reports. Table 1 shows the history of the conferences held and the measures taken in the field of climate change.

Table 1 Conferences of Members of the Climate Change Convention (2020-1995)

year	location	results
1995	Berlin	Agree to hold new negotiations on strengthening the Convention and set up a special protocol to reduce greenhouse gas emissions (no commitments made for developing countries).
1996	Geneva	Members request to create legal requirements to significantly reduce greenhouse gases
1997	Kyoto	Ratification of the Kyoto Protocol
1998	Buenos Aires	Discussion of the mechanisms of the Kyoto Protocol
1999	Bonn	Approval of the Buenos Aires Order (strengthening the implementation of the Convention and preparing for the entry of the Kyoto Protocol into the implementation phase)
2000	The Hague	Discussing issues raised in Buenos Aires (finance, mechanisms, forestry, commitment and compliance) and considering three new financing methods for **Confronting** climate change (Climate Change Funds, Less Developed Countries and Adaptation)
2001	Morocco	Explain the methods of measuring emissions, reducing and detecting carbon dioxide emissions in the area of Kyoto Protocol reduction commitments, how to apply joint cooperation mechanisms as a project, the necessary rules to ensure compliance, creating a special climate change fund to provide capital For less developed and developing countries to adapt to the consequences of climate change and to obtain clean technologies and limit the growth rate of fossil fuel emissions
2002	New Delhi	Statement on Climate Change and Sustainable Development, including the legal obligations and procedures of the Clean Development Mechanism projects and the duties of its Executive committee.
2003	Milan	The Necessity of effective supervision and strengthening of infrastructure and situations in need of private sector investment, emphasizing the importance of choosing the best available technology for massive investments in electricity generation in the next 97 years, agreeing on how and to what extent carbon management forest management projects
2004	Buenos Aires	Completion of the results of the Moroccan document and expansion of the scope of activities requiring private sector investment, emphasis on further development of the method of calculating the base emissions in the energy and transport sections, emphasis of OPEC member countries on the adverse effects of countermeasures and transparency Article 42 Convention
2005	Montreal	Select members of executive committees and review their rules, structure and mechanism.
2006	Nairobi	The decision to create a new fund to help developing countries In order to prepare against the change of earth temperature, more pressure on the United States to sign the Kyoto Protocol.

year	location	results
2007	Bali	30 to 50 percent reduction in greenhouse gas emissions by the middle of this century, Japan proposes to reduce greenhouse gases by setting energy efficiency standards in industry, sharing environmentally sound technologies with developing countries, paving the way for a global agreement after the 2012 Kyoto Protocol expires
2008	**Poznań**	Prepare arrangements for a contract to replace the Kyoto Protocol
2009	Copenhagen	Codification a new contract to replace the Kyoto Protocol from 2010 to 2020 and then until 2050, defining the responsibilities of industrialized countries to reduce greenhouse gas emissions, Evaluate the negotiations on the projects of the Clean Climate Development Mechanism, the process of land use change, lands and prevention of deforestation and codification criteria related to them.
2010	Cancun	Supporting the production and propagation of scientific knowledge by researchers in developing countries, community-based society and adaptation; planning and evaluation of adaptation; Financial adaptation and development adaption to climate, communicating with climate change Lessons from fair trade; And climate change and forced migration.
2011	Durban	Agree on a technology mechanism for developing countries to access clean and low-carbon technologies and an adaptation committee to enhance coordination of adaptation activities on a global scale.
2012	Doha	Improving approaches to confronting with losses related to the effects of climate change in developing countries, which are particularly vulnerable to the adverse effects of these changes. Adoption of the Doha Eight-Year Work Plan on Article 6 of the Convention (Article 6 commits states to promote and facilitate education and public awareness on climate change)
2013	Warsaw	Provide a general document in four areas; Data and observations, capacity building, research and adaptation
2014	Lima	The most important and main opportunity for the world countries to negotiate before the definite commitment in Paris and to contribute to the **enormous** reduction of carbon emissions; Commitment to green economy mobility and the possibility of low carbon development.
2015	Paris	Prepare the world to confronting the challenge of climate change; Provide a clear, short path with long-term milestones and systematic to help measure and increase progress over time.
2016	Morocco	Emphasis on the need to purposefully reduce greenhouse gas emissions and strengthen adaptation efforts.
2017	Bonn	Guidance on completing the work program of the Paris Agreement, operationalizing local and indigenous communities, creating a gender action plan, etc. ...
2018	Katowice	Codification and approval decisions to ensure full implementation of the Paris Agreement in accordance with the decisions taken; Facilitating discussion to support the implementation of national commitments and ...
2019	Madrid	This conference seeks to create the necessary platform for the implementation of the agendas of the Paris Agreement on the eve of 2020; A year in which countries are committed to implementing new and up-to-date programs.
2020	Glasgow	It was originally scheduled to take place in November 2020, but was postponed for twelve months due to **epidemic corona** virus.

Source: World Meteorological Organization

4 ADAPTATION WITH CLIMATE CHANGE

Adaptation refers to actions taken in a vulnerable system in response to actual or expected weather stimuli to mitigate the damage caused by climate change or seize opportunities (McCarthy et al. 2001). The word adaptation means change and adaptation. In meteorology, adaptation is done with the goal of adapting to climate variability, which means that ecological and social systems change in such a way that they last over time. Climate change adaptation includes a wide range of measures to reduce vulnerability to a wide range of climate stimuli (change in equipment, variability and excess). Adaptation is more of a long-term process that seeks to evolve and adapt between environmental and social systems. In the adaptation process, in addition to overcoming the stresses caused by climate change and reducing the damage, the use of potential opportunities created by climate change is also pursued. Adaptation to climate change is quite context-specific, as it depends on the climatic, environmental, social and political conditions in the region and section. Various strategies and models have been proposed in relation to adaptation to climate change. Before any model and strategy can be stated in this field, some basic questions in this field should be addressed:

1. What is adaptation?
2. Adaptation with what? (Related climate stimuli) In this case, temporal and spatial phenomena and dimensions must be identified (McDowell et al., 2019).

In terms of timing, adaptation may be a reaction to changes that occur, coinciding with an ongoing event, or anticipating future events to prevent them. Ecological systems usually show reactive adaptation. In socio-economic systems, usually simultaneously, and in planned adaptations, an attempt is usually made to anticipate harmful events or to take advantage of possible situations. According to temporal domain, adaptation can be short-term or technical (such as environmental hazards) or long-term or strategic, and in terms of spatial range, adaptation can be done locally or on a large scale.

3. Who should adapt and with what? The characteristics of adaptation targeting are determined and whether adaptation should be done to individuals or to the whole of society. Other questions that arise in the context are whether adaptation should occur in all social and ecological structures or whether it involves only certain sections?
4. How should adaptation occur? (Typology) that the processes and results of adaptation must be determined at this stage. Depending on the intention or goal, adaptation can be done independently (spontaneously) or consciously (planned). Public institutions usually make planned adjustments, but individuals or private institutions may use both methods.
5. To what extent has adaptation been effective? That evaluates the degree of adaptation and determines the criteria and rules of principle in terms of the degree of success of adaptation. In this case, the costs and the amount of re-

duction of damage or benefits provided are estimated and can be graded in different ranges from high adaptation to high dis-adaptation.

What factors determine the success rate of adapting to climate change?

– Type and amount of environmental changes
– The degree of flexibility of different parts (tolerance thresholds)
– Socio-political conditions, resources, processes and physical systems (Piggott-McKellar et al., 2019).

The most important reasons for adaptation fans

1. At the global level, reaching an international agreement that all countries of the world adhere to and implement is very difficult and even impossible; because is impossible to forcing countries to accept emission reduction agreements, obligation to fulfill accepted commitments and monitor their proper implementation. However, adaptation can be done locally and regionally and separately from international measures.
2. Due to the large volume of greenhouse gas emissions in recent years and the reaction of climate systems to changes in the composition of the Earth's atmosphere, reducing emissions cannot stop the changes.
3. The belief that reducing emissions is inconsistent with meeting the needs of the planet's inhabitants, the employment of the majority of people in the industrial and development sectors in developed and developing countries.
4. The benefits of adaptation occur faster, but action to reduce emissions takes several decades, and in addition, adaptation, regardless of the discussion of climate change, is also used in conditions of widespread environmental variability (Jeyrani and Morid, 2019).

5 CONFRONTING WITH CLIMATE CHANGE

Confronting literally means opposition, Countermeasure and conflict, and here refers to actions taken to reduce or stop climate change. As these amounts of greenhouse gases in the atmosphere increase, these changes are becoming more severe, so confronting is a set of solutions to stop or reduce emissions and even reduce the amount of greenhouse gases in the atmosphere. Confronting include reducing emissions, reducing greenhouse gas concentrations, clearing the atmosphere of excess greenhouse gases, and even climate interventions or geo-engineering.

Emission reduction: The most important goal of global climate change agreements and conventions is to create legal requirements and warn politicians and people to reduce greenhouse gas emissions. The extent of this reduction must be such that the oceans and plants are able to absorb it, and global warming must be controlled to a certain extent.

Reduction of greenhouse gas concentrations (atmospheric purification): Reducing or stopping emissions will only slow or stabilize the amount of greenhouse gases, and to return to global climate change in the pre-change era, the density of the gases must return to the level required for the earth to the natural greenhouse

effect. There are two direct and indirect methods for absorbing these gases. In the indirect method, the atmosphere can be refined by expanding plants, especially broadleaf, which are natural absorbers of carbon dioxide as the most important greenhouse gas. In the direct method, adsorption, deposition, etc., the amount of carbon dioxide and other greenhouse gases in the atmosphere is reduced. Geo-engineering seeks to provide solutions for this.

Geo-Engineering or Climate Interventions: Geo-engineering is a set of actions that are performed with the main goal of engineering or controlling climate systems by scientific methods (Keith and Dowlatabadi, 1992, 289). Geo-engineering involves two main methods: carbon dioxide removal and solar radiation management. Solar radiation management methods include methods to adjust the balance of radiation, so that the amount of solar energy input decreases or the amount of albedo and Earth reflection increases (Irvine et al., 2019), which include Lightening the color of structures, increased reflection by placing strong reflectors in areas such as deserts, increased crop cultivation with high solar reflectance, injection of sulfate aerosol into the stratosphere, increased sea-cloud reflectance or reflection or sea-cloud fertility, shield launch or deflectors to space to reduce the input of solar energy and etc. Carbon dioxide removal method includes land use management design activities to increase carbon dioxide absorption and includes carbon sedimentation and use of biomass to produce neutral carbon energy, intensification of natural weathering to remove carbon dioxide from the atmosphere, construction of equipment to directly absorb carbon dioxide from the atmosphere, artificial insemination of oceans with nutrients to increase the ability to absorb carbon dioxide, etc. (Rahm, 2018). However, proceed to geo-engineering or climate intervention requires ethical, social, legal, and diplomatic relations not to get out of control (Stephens and Surprise, 2020).

What factors determine the success rate of climate change?

– Laws and requirements created for countries by international forums and their executive powers
– The extent to which the inhabitants of the planet feel threatened by climate change (politicians, citizens)
– The level of trust in the actions of other countries in the world

The main reasons for the fans of the confronting:

1. The Earth's atmosphere is an interconnected system, so any change in any part of the Earth affects all other parts of the Earth. If greenhouse gas emissions continue in parts of the globe, all efforts to adapt will be wasted; because adaptation is done in accordance with certain environmental conditions and with the change of conditions, adaptation strategies and its intensity will also change.
2. Compatibility adjustment of vulnerability of modified systems. Hence there is no cure and only painkillers have been created to reduce the vulnerability of the condition.
3. Achieving global solutions to reduce greenhouse gas emissions, in addition to the definite impact and saving the living conditions on the planet from the un-

healthy conditions, is itself an exercise in international diplomatic relations and will lead to the consolidation of global relations and cooperation in all areas of world peace.

4. Future generations share in the use of the planet's resources as much as current and past generations, so we cannot, by selfishness or procrastination in reducing greenhouse gas emissions, remind them of very harsh environmental conditions and lead them to extinction. Or lead to life with very unfavorable environmental conditions.
5. Adaptation to climate change will be responsive to the extent that living and activity thresholds are responsive. Crossing the thresholds can no longer hope for compatibility.
6. According to the geographical characteristics of the world, the level of vulnerability of different countries and regions from climate change will not be the same. Lack of water resources, overheating of some areas and lack of food for the residents, in addition to providing an opportunity for climate refugees to invade areas with more favorable conditions, will lead to tensions, global conflicts and even bloody wars that bring peace and security. It endangers the world.
7. Compatibility cannot prevent all the effects of climate change due to fundamental and practical limitations. So compatibility with change.

6 CONCLUSION

Humans can respond to this challenge in two ways to be secure from the events and consequences of climate change: confronting and adaptation. In confronting, by finding the causes of climate change, humans seek to reduce greenhouse gas emissions or clear the atmosphere of excess greenhouse gases, and in the adaptation method, it seeks to reduce the effects of climate change on various dimensions. Therefore, it can be concluded that confronting is definitive treatment and adaptation is short-term or long-term relief. In other words, countering is an active effort to reduce or stop climate change in relation to the whole world and adaptation is to act regionally to mitigate the consequences of climate change regardless of the factors that cause it.

If the only human way to respond to the challenge of climate change is adaptation, with the intensification of these changes, man is forced to accept more difficult conditions and more severe adaptation. Now the question that arises here is how long will this adaptation continue and to what extent is man able to continue in this way? Will accepting difficult adaptation conditions reduce the rate of change? If a large fire is lit in a confined space, perhaps the first way to avoid it is to take refuge in a corner that is out of reach. However, as the fire spreads, the safe spaces will also decrease and the suffering and hardship of the created conditions will gradually force the human being to surrender to the created fire. If man is only thinking of adapting to the conditions of climate change, it will mean that the condi-

tions are becoming more difficult day by day and the places on the earth that are less damaged will become less and less. This will make things very difficult for future generations of human beings, and it will mean that over time, future generations will be closer to the brink of extinction caused by climate change. In these circumstances, man will have no choice but to take very serious and sudden measures. As a result of these very intense activities, all aspects of human life and activity will be crippled, and will appear very serious social and economic challenges and problems. Therefore, procrastination in confronting and reduction of emissions will mean a long sleep and, of course, silent death, which will deprive or delay any practical and effective action.

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Zmena podnebia; konfrontácia alebo prispôsobenie sa?

Súhrn

Medzivládny panel pre zmenu klímy (IPCC) definuje zmenu klímy ako zmenu počasia, ktorú možno identifikovať zmenou priemerných hodnôt jeho a/alebo zmenou jeho charakteristík (napríklad pomocou štatistických testov). Zmena trvá dlho, zvyčajne desaťročia alebo viac (IPCC, 2007). Klimatické zmeny môžu byť spôsobené prirodzenými vnútornými procesmi alebo aplikáciou vonkajších tlakov, ako je integrácia slnečných cyklov, sopečné erupcie a nepretržité ľudské zásahy v zložení atmosféry alebo využívania pôdy. To, čo je dnes známe ako zmena klímy, je spôsobené globálnym otepľovaním alebo širšie, globálnym otepľovaním, ktoré v dôsledku kontinuity klimatického systému ovplyvnilo jeho jednotlivé časti a intenzitu vplyvu a aj samotnú účinnosť napr. atmosféry, vodnej sféry a ľadovej sféry. A biosféra sa následne prispôsobuje, čo vedie k vážnym abnormalitám.

Ľudia môžu na túto výzvu reagovať dvoma spôsobmi, aby sa ochránili pred udalosťami a následkami zmeny klímy: konfrontáciou alebo adaptáciou. Pri konfrontácii, hľadaním príčin klimatickej zmeny, sa ľudia snažia najmä znížiť emisie skleníkových plynov, resp. vyčistiť atmosféru od prebytočných skleníkových plynov a pri adaptačnom prístupe sa ľudstvo snaží znížiť dopady klimatickej zmeny rôznymi spôsobmi. Preto možno v zásade konštatovať, že konfrontácia je definitívna liečba a adaptácia je krátkodobá, prípadne dlhodobejšia úľava. Inými slovami, boj proti zmene klímy je aktívna snaha znížiť alebo zastaviť zmenu klímy vo vzťahu k „celému svetu“ a adaptácia znamená pôsobiť regionálne na zmiernenie dôsledkov zmeny klímy bez ohľadu na faktory, ktoré ju spôsobujú.

Ak je jedinou cestou ľudstva, ako reagovať na výzvu klimatických zmien je adaptácia, so zvyšujúcou sa intenzitou zmien klímy je človek nútený akceptovať ťažšie podmienky a stále tvrdšie podmienky adaptácie. Teraz tu vyvstáva otázka, ako dlho bude toto prispôsobovanie pokračovať a do akej miery je človek schopný takto pokračovať a dokedy to naša planéta vydrží? Zníži prijatie zložitých adaptačných podmienok mieru zmien? Ak je „veľký oheň zapálený v uzavretom priestore“, možno prvým spôsobom, ako sa mu vyhnúť, je uchýliť sa „do rohu“, ktorý je mimo dosa-

hu. S rozširovaním ohňa však ubúdajú aj bezpečné priestory a utrpenie a strádanie z nových vytvorených podmienok postupne prinúti človeka „vzdať sa ním vytvorenému ohňu“. Ak človek myslí len na prispôsobenie sa podmienkam klimatickej zmeny, bude to znamenať, že podmienky budú zo dňa na deň ťažšie a menej poškodených miest na Zemi bude čoraz menej.

Tento vývoj veľmi skomplikuje prácu budúcim generáciám ľudských bytostí a bude to s veľkou pravdepodobnosťou znamenať, že budúce generácie budú časom bližšie k pokraju vyhynutia spôsobeného klimatickými zmenami. Za týchto okolností človeku, zdá sa, nezostáva nič iné, ako urobiť veľmi vážne a rýchle opatrenia. V dôsledku týchto veľmi intenzívnych aktivít budú viaceré aspekty ľudského života a globálnej spoločnosti „ochromené“, resp. podstatne limitované, v dôsledku čoho sa objavia veľmi vážne sociálne a ekonomické výzvy a problémy. Preto otáľanie v konfrontácii pri znižovaní emisií bude znamenať „dlhý spánok“ a samozrejme tichú smrť, ktorá znemožní alebo na dlhú dobu odloží akúkoľvek praktickú a účinnú akciu.