

# Climate change and international security

Ali Heydari

Master of International Law Academic year  
2022

## Abstract

One of the problems in today's world is climate change, which has led to fundamental changes in the economic and social conditions of the world. Despite the fact that the effects of climate change threaten living conditions in large parts of the world, various groups of activists have failed to improve the climate regime. It Is natural that those countries most affected by climate change should look for ways to improve the climate regime both through legal methods and other less formal methods such as recognizing climate change as a security issue and environmental problem. The purpose of this article is to examine climate change and international security. The research method is descriptive-analytical and information was collected using library sources. The findings have shown that climate changes such as the warming of the earth's temperature, the occurrence of natural disasters such as floods, tsunamis and droughts have many effects on the economic and social situation. Consequences such as creating a platform for international conflicts, increasing internal conflicts and insecurity, the spread of infectious diseases, immigration, political destabilization, and ethnic and internal wars are among the results of climate change. For this reason, climate change and environmental problems can be considered as one of the influential elements in international security.

**Key words:** climate change, international security, climate, natural disasters, national security, environment  
**Introduction**

## 1-1 -Statement of the problem

The conditions of climate change and global warming are presented as a threat to human security, because lack of food and water, environmental destruction, poverty, and the spread of disease create mass migration, each of which can lead to harm national security and contribute to the scenario of a failed government.

In the domestic arena and in the global arena, the security of the modern state becomes meaningful when it has superior power, in this case, even if It faces the absence of threats, it is considered an insecure society. In the modern discourse of national security, we see the addition of the software aspect of security in addition to its hardware aspect.

Following the development of the concept of security and especially the development of the range of threats related to national security, critics claimed that civilian threats such as environmental and economic threats can be as serious as military threats and therefore these threats should also be considered as security threats.

Today, environmental concerns have become a serious security issue in international relations and have created important concerns for statesmen. Since environmental problems caused by climate change are becoming more serious, this can be considered as an influential variable in domestic or international conflicts. Climate changes disrupt not only natural habitats but also the social arrangements of societies and increase the possibility of violent conflicts and threaten international peace and security and affect environmental justice.

## 1-2 Research background

In the past few years, considering the problems caused by climate change and its impact on international security, researches have been

conducted in this field, some examples of which are mentioned:

Akhavan Kazemi et al. (2018) conducted a study entitled Studying the impact of climate change on international security. The aim of this research is to investigate and identify threats and environmental factors caused by climate change on the peace and security of the international system, and it analyzes the extent and mechanism of this influence.

Jalali et al. (2017) wrote an article entitled the effect of environmental dimensions of climate change on national security. According to the authors, in the domestic arena and in the global arena, the security of the modern state becomes meaningful when it has superior power, in this case, even if it faces the lack of threats, a society is considered insecure.

In the modern discourse of national security, we see the addition of the software aspect of security in addition to its hardware aspect. Following the development of the concept of security and especially the development of the range of threats related to national security, critics came to this conclusion and claimed that civilian threats such as environmental and economic threats can be as serious as military threats.

And therefore, these threats should also be considered as security threats. In this article, by resorting to an interdisciplinary approach, an analysis of the impact of environmental aspects of climate change on national security is presented from the perspective of international environmental law.

Mousavi and Mirmohammadi (2012) wrote an article titled Climate Change: A Threat to International Peace and Security. Undoubtedly, the increase in the temperature of the earth will endanger the basic foundations of human life, especially in developing countries, it will intensify the vulnerability to poverty and social

deprivation, and it will endanger human security.

The hypothesis of this article is that the issue of climate change is considered a threat to international peace and security due to its domestic and international consequences. And the reason for the division of votes in the Security Council regarding this issue is due to the criticisms that are made on the body of power and politics in the international arena.

Afshari (2010) has addressed the issue of climate change in a study titled the effects of climate change on human peace and security. In this research, the impact of climate change on human security has been mentioned, and the results have shown that climate change is considered as one of the disturbing factors of human security at the global and national level, and if climate change continues, human security and peace will be at risk.

Bourghi (2008) conducted a research titled climate change and international security. This research examines the possibility of influencing the phenomenon of climate change on the issue of international security.

Nowadays, issues related to the human environment have become very important and environmental issues are considered among the concerns of human society. Therefore, while explaining the place of climate change and referring to the history of studies related to this issue, a brief review has been made in relation to the results and consequences of climate change and the possible effects of such consequences.

In order to show the effects of climate change on international security, the concept of security at different levels as well as its conceptual evolution in different periods have been examined, so that based on that, effectiveness and lack of effectiveness can be determined more clearly.

**1-3 Necessity of the research**

Climate change in the 21<sup>st</sup> century has had a major impact on global security more than ever before.

If it was ever necessary to pay attention to environmental threats for human comfort and happiness, today, these threats are considered a real and serious threat to the security of nation-states, thus, countries are forced to face and respond to threats and challenges that did not have much importance and status before.

These non-traditional security threats have made the development, survival and well-being of mankind and governments face serious risks and challenges. Therefore, it is necessary to conduct a comprehensive research in this field so that its dimensions are known at the national and international level.

**1-4-Research method**

**1-4-Climate changes**

Climate change refers to changes in the conditions and characteristics of the climate of a place in the long term.

Also, according to paragraph 2 of Article 1 of the United Nations Framework Convention on Climate Change, "A change in the atmosphere, that is, a change that directly or indirectly as a result of human activities, leads to a change in the composition of the global atmosphere."

These changes are different from the natural changes in climate that are observed in similar periods of time. Although climate changes will increase the adaptive capacity of many societies in the coming decades, Its consequences will lead to instability and violence and will endanger national and international security.

During the 20th century, the temperature of the earth's surface increased by more than 0.7 degrees Celsius, as this period was the

The research method is descriptive-analytical in terms of practical purpose and descriptive-analytical and statistical in terms of data collection method. In this research, the library method will be used to collect information.

The method of theoretical and library study is mainly to study the literature of the subject and examine the background of the research, as well as the studies and views that exist on the subject under research and also to create a suitable framework for examining the subject.

And by referring to library resources including: books, research journals, periodicals, publications of research and research centers, searching in electronic information databases, the theoretical part and literature of the subject will be studied and reviewed.

warmest period for this earth during the last 1921 years. January 2000 to December 2009 is recorded as the "warmest decade" on record.

On the other hand, the number of natural disasters has doubled from 200 to 250 cases in 1987 to 1997 in the first seven years of the 21<sup>st</sup> century. Statistics show that during the last two decades, these disasters have increased not only In number, but also In the amount of destruction. (Mousavi, Mirmohammadi, 2012: 168).

"Climate change" in the meaning of Article 5 of the United Nations Structural Convention means a change in climate that is directly or indirectly caused by human activities that causes a change in the composition of the global atmosphere. These changes are different from the natural changes in weather that are observed in similar periods of time" (Abdullahi, 2010: 194).

In this definition, social changes are caused by the direct and indirect activities of humans, such as the production of greenhouse gases that cause changes in atmospheric conditions. In the new paradigm, along with military and hardware variables, political, economic, socio-cultural and environmental components are considered as factors that can act as a threat to international security.

Climate change is one of the most Important and complex international challenges in the era of globalization. These small changes in the earth's temperature can lead to potential danger in global climate changes. Our life today depends on climate change.

In the International scene, the effects of these threats can be seen in the relations between countries. For example, the war in Darfur can be seen as the first conflict In the field of climate change. In addition to social tensions, these threats will also lead to political unrest and violent conflicts (Fazli et al., 2015: 49).

Climate change includes all types of climate change at the global and regional level, including warming of the earth's temperature, natural events such as floods, tsunamis, and droughts. Nowadays, warming of the earth's temperature, drought, and water crisis can be considered important concerns of countries.

### **1-5-Environmental security**

Today, security, peace and stability in all fields are considered necessary and vital for all people.

Governments based on people's votes always seek to create security for citizens at the local, regional, national and global levels, and they take steps in this direction by establishing cooperation and communicating with each other.

According to existing classical views, security is defined in the absence of threats,

and a safe society is a society in which no threat disturbs its existence and life. Meanwhile, the nature of acting is evaluated as having a significant amount of power to intervene in human life.

Therefore, human security can be severely threatened in this area. Paying attention to this fact has led the classical positivists to put the dangers caused by nature's operation In the first priority of their security considerations and studies.

Although the new classics have criticized this view and believe that nature is designed in such a way that in case of any defect in it, it repairs and corrects itself. But now the critical environmental conditions of the planet once again lead us to pay attention to the views of the first group. (AkhavanKazemi and colleagues, 2019: 13).

Environmental security is the state of human-environment dynamics, which includes the reconstruction of environmental damage caused by military actions, improvement of scarce resources, resource erosion, and biological threats that can lead to instability and social conflict.

Environmental security is the protection of natural environments to meet the needs of society in such a way that its reserves are not harmed (Kaviani Rad, 2010: 88).The emergence of global environmental problems, such as global warming and the loss of the ozone layer, led to one of the first efforts to secure the environment on a global scale.

According to Brundtland's report (1980), "There are few threats to the peace and survival of human society compared to the threats posed by the prospects of the increasing and irreversible destruction of the biosphere on which human life depends."

New threats indicate the need to redefine the nature of security in an interdependent world

that continues to face new challenges. In the post-Cold War era, the discourse of environmental security has led to open a door to discuss a common approach in security affairs.

For example, in December 1988 at the United Nations General Assembly, Gorbachev emphasized that:

The relationship between man and the environment has become a threatening relationship. “The threat from the sky is no longer the launch of missiles, but global warming” .He also presented the idea of forming the Environmental Security Council.

Following these requests about security, several initiatives were taken in the early post-Cold War period (Jalali et al., 2017: 180).

Concerns about climate change not only led to the creation of the Intergovernmental Panel on Climate Change (to assess the scientific, technical and socio-economic aspects of human impact on climate change),also led to the signing of the United Nations Framework Convention on Climate Change in Rio in 1992.

However, climate change negotiations were more difficult than ozone negotiations; Because taking action on climate change requires changing a large part of the existing economic structure and way of life.

Therefore, climate change was marginalized and neglected in the discourse of environmental security (Ibid.: 181).Therefore, strengthening environmental security requires international cooperation of all countries and adherence to environmental obligations.

**1-6 the challenge of climate change**

Climate change has been recognized as one of the most Important and complex

challenges of the 21st century at the international level.

Most aspects and areas of human life have been affected by these changes. Biodiversity, agriculture, drinking water sources, industry, health and many other aspects of civilized human life have been affected by this factor. The increase in greenhouse gas emissions has raised fundamental questions about the intensity and type of effects of climate change at the international level.

Of course, In recent years, the understanding of these changes has improved at the global level. The destruction of nature and the increase of environmental pressures have led to the development of related conventions and agreements in the field of climate change.

But successive droughts, floods and hot air currents, which are expected to intensify with climate change, have caused the displacement of millions of people and food shortages. Changes in measuring rainfall, humidity and temperature changes have left changes in biodiversity, ecosystem and personal health and lifestyle of people (Fazeli et al., 2015: 54).

For this reason, climate change can be considered as one of the challenges of the present century, and neglecting it will have negative effects.

**1-7 International commitments in dealing with climate change**

Part of the efforts in dealing with climate change are the treaties and declarations that are concluded by international organizations and oblige their member countries to comply with them.

These treaties are sources that are not binding and do not have a specific implementation guarantee, which include: statements, resolutions, agendas, action plans.



Their main purpose is to express the principles and rules that guide the actions of governments. Although these sources are not binding In themselves, they have a very important impact on the development of international environmental law.

The most important of these sources are the 1972 Stockholm Declaration on Man and the Environment, the 1982 Universal Charter of Nature approved by the United Nations General Assembly, as well as the 1992 Rio Declarations, which have had a great impact on this legal field.

The most important international treaties on climate change are: a) Stockholm declaration, b) Rio conference or summit (this summit and previous summits led to the adoption of the framework convention and the Kyoto protocol), c) the United Nations framework convention on climate change and the meeting of members, d) the Kyoto protocol , c) Copenhagen meeting, c) Paris meeting, Paris agreement (21COP).

Although these treaties do not have an executive aspect, they are a road map to prevent the increase of climate change and environmental changes, which has so far led to the establishment and cooperation of countries in the field of combating climate change.

**1-8 The challenge of weather security**

.Over the past few years, concerns about climate change have drawn increasing attention

Several factors have contributed to this new development: on the one hand, there has been a growing consensus on various aspects of the Impact of human activities on climate; On the other hand, since the withdrawal of the United States from the Kyoto Protocol, there have been several “securitization measures” aimed at promoting measures to deal with

climate change and its consequences, which have been on both sides of the Atlantic.

Climate security refers to a concern for the preservation and maintenance of stable climate conditions as a precondition for all human action, rather than simply the security of the climate itself.

Climate security is created so that the people and societies that depend on It are kept safe. Like the issue of environmental security, climate security is about “maintaining the achieved levels of civilization” .)Berry, 1991: 28 (

This addresses the main problem and identifies two contrasting approaches to security regulation. The first approach, relying on emergency measures, shows that it is not possible to prepare for all potential threats and it is better to deal with them when emergency situations occur; The second approach is to adopt preventive measures that inform about potential catastrophic effects.

This transformation is evident in the discussion about the type of threats caused by climate change and its recent transformations. There are two aspects to this transformation.

First, much of the debate has been framed in terms of adaptation to climate change, assuming that it will be a slow process.

This is implicit in the statement that the goal of the UNFCCC convention is to achieve stability in the concentration of greenhouse gases in the atmosphere, which prevents the interference of human activities in the climate system.

Such a concentration must be achieved In sufficient time for ecosystems to naturally adapt to climate change. To ensure that there is no threat in food production and economic development can continue in a sustainable manner (Jalali et al., Previous: 183).

This discourse takes into account the relative stability of climate systems, continuous changes occur in a predictable manner, and relies on human adaptability and innovation.

The possibility of catastrophic events has challenged this approach. Examples of such catastrophic events could be the disruption of the Gulf Stream, the weakening of the monsoon system, and the instability of continental ice sheets. The recent securitization movement relies on considerable reshaping of this threat. The second aspect is the shift in importance between two different and shared securitizations.

The first securitization considers climate change as a threat. The second securitization considers environmental policies as a threat. The second was evident in the US position at the 1992 Earth Summit, when George W. Bush stated that "the American way of life is not negotiable" (Ulrich 2006:329).

The United States subsequently withdrew from the Kyoto Protocol, which was considered a threat to the US economy. This type of security is also evident in the expression of concern of some developing countries. Which indicates opposition to the implementation of those policies whose aim is to force them to reduce their greenhouse gas emissions, because such policies can threaten their development process.

**1\_9Climate changes and international security**

Undoubtedly, the increase in global temperature will endanger the basic foundations of human life, especially in developing countries; It increases vulnerability to poverty and social deprivation and endangers human security.

These changes will also provide the basis for the occurrence of conflicts more than before. Rising sea levels and the occurrence of

storms and floods in the future will threaten the cities and industrial areas along the coasts of China, India and the United States of America. The melting of the Ice makes it more difficult to supply water In the areas near the Andes and Himalayas.

Considering this perspective, the Security Council, as a pillar of international peace and security, on April 17, 2007, In its 5663 meeting, started its first negotiations regarding the relationship between energy, security and climate change at the request of the United Kingdom, which was the head of the Council at that time.

It seems that the council's action in holding this meeting indicates the need to pay attention to the relationship between climate change and international security (Mousavi, Mirmohammadi, Previous: 167).

If the issue of climate change is recognized as a threat to human security, it can unite the international community in dealing with it and cause this whole unit to act by creating and following cooperation mechanisms to deal with the destructive effects of these changes ; but otherwise, climate changes have given more depth to conflicts in the field of international relations.

And leading to the start of international conflicts between governments over the distribution of resources, especially water and land and it will also lead to the management of migrations or the discussion of compensation between the governments that are responsible for climate change and the countries that are affected by its destructive effects (Ibid.: 169)

**1-10-1 Creating a platform for international conflicts**

A dramatic Increase in the number of climate refugees or in other words, "these sun and rain fugitives" will lead to more tensions or

violent conflicts between countries regarding uncontrolled immigration.

Probably, these massive migrations, in a short period of time, will become a problem for the host. countries of these refugees. It is possible that the reaction to sudden and unpredictable crises (increasing religious conflicts and the occurrence of possible violence and criminality by minority and immigrant groups) will worsen the constant tensions caused by immigration. The Increase in political tensions can also be considered as another factor in the occurrence of conflict and insecurity between countries.

In fact, developing countries generally suffer more from the harmful effects of climate change due to the lack of adequate response capacities to events that occur simultaneously or continuously on a large scale

At the same time, industrialized countries that apparently have the ability to face these changes will also face other issues and problems (Mousavi, Mirmohammadi, 2013: 176).Countries and regions where extreme climate changes have occurred will inevitably face problems such as migration and population displacement.

**Increasing conflicts and internal insecurity 1-10-2**

The social consequences of climate change will most likely lead to an increase in the failure of governments to provide stability and security, and as a result, numerous and scattered internal conflicts.

Continuous internal conflicts, failure of crisis management systems after extensive and severe natural disasters and increase in environmental migrations are undoubtedly uncontrollable and unmanageable without the support of the police and military capabilities. Therefore, it will challenge the country's security system.

A notable example regarding the effect of climate change on conflict is the situation in Sudan.

According to the opinion of the United Nations Environment Program (UNEP), climate changes that have caused a decrease in rainfall In Darfur and ultimately led to a decrease In agricultural production in this region have played a role In the occurrence of this conflict (UNEP, 2007).

**1-10-3 Outbreak of infectious diseases**

Climate changes with factors such as natural disasters and prolonged periods of drought can cause food shortages, malnutrition, and ultimately the weakening of the body's immune system and reduced immunity against diseases. The health consequences of climate change can also be a threat to human peace and security. As we have seen, there are diseases that do not recognize national limits and borders In today's globalized world and will Involve everywhere (Wisner, 2007: 3).

**1-10-4 Immigration**

.One of the security effects of climate change is the issue of forced migration

In fact, natural disasters caused by climate change, such as floods, river overflows, continuous warming of the earth, droughts, violent storms, and tsunamis cause many people to become homeless.

Some of them have to seek refuge and migrate to other countries to save their lives, which will become a complex problem (Shamshiri and Jafari, 2013: 86).

The pressures caused by climate change will probably increase the cost of access to public infrastructure such as water resources, services such as education and reduce government revenues.



Therefore, climate change may reduce the government’s ability to create opportunities and capacities for people. Migration is the reaction of those whose livelihoods have been destroyed due to climate change. Due to these pressures, they are forced to decide to migrate.

At the same time, It may become the basis for the intensification of protest movements in the host community.

**1-10-5 Political destabilization**

Another effect is political destabilization, which will most likely occur in southern countries as a result of climate change.

Especially the negative effects of the things we have witnessed or will happen in the future. These effects have been described in the urban areas of developing or less developed countries, which have the highest population concentration and high risks.

Climate change is also examined in relation to human rights and the rights of nations, and It is considered a basis for threatening access to drinking water, access to proper housing, and a basis for violating the sovereignty of the member states of the United Nations.(9-8: 2013, UIO).

**1-10-6 Ethnic and internal wars**

Another effect of climate change is the rise of sea level and global warming, flooding and possible drowning of low-lying coastal areas, which may put the countries located in the South Pacific Ocean and the coastal areas of Asia at risk.

With these changes and the loss of land mass, the forced migration of climate change refugees also occurs, and the Security Council considers this migration a threat to international peace and security and considers this issue as a prelude to ethnic and internal wars.

Climate change also reduces water resources and rain, and this issue affects the production of the agricultural sector and causes food poverty.

The United Nations Environment Program in the evaluation report of Sudan’s environmental war has identified climate change and environmental destruction as the cause of part of the conflicts in Darfur

In fact, these changes have caused drought and desertification, which has also caused conflicts. These threats are increasing day by day and have put international peace and security in wide danger, which is the danger of water war. (9: 2009, Saul)

**1-11 The variety of consequences of climate change**

Climate changes generally do not have the same effects and consequences, but sometimes depending on different climate regions in the world, these consequences are completely different and even opposite. For example, as global warming increases the risk of floods, It also increases the possibility of long-term droughts.

Changes in snow and rain patterns will have potentially severe effects on agricultural products.

The first signs of this problem appeared during the 1970s, when the rainfall patterns that played a major role in agriculture In the southern region of the Sahara desert in Africa gradually began to decline.

The continuation of long-term droughts also led to famine in the Sahel region in the same region, and finally, it followed the Ethiopian famine in the 80s. New researches show that this direction of rains towards the northern regions was due to the pollution of the atmosphere and the warming of the earth.

The consequences of global food production reduction along with natural disasters related

to climate change will have harmful effects on national and regional security. That these effects are different depending on the ability of governments to maintain their economic and social development (NOVA 2006).

On another level, as a result of climate change, fish ecosystems and oceanic fish stocks may change and this will endanger the lives of coastal fishermen whose lives depend on these stocks.

A concrete example of such events occurred during the 90s, In which the United States and Canada negotiated the Pacific Ocean Free Fish Agreement, which lasted more than 3 years, due to the arrest of fishing boats and the occurrence of many tensions.

Undoubtedly, climate changes will lead to more and more prevalence of such experiences (148 p...2009. Kimble). In general, climate changes cause the economy of the regions that are exposed to these changes to be at risk, and the consequences are job changes and migration.

**Conclusion**

The International community has almost reached a consensus that the study of climate change, like other environmental policies, such as the protection and restoration of habitats and the management of pollution and chemicals, should be strengthened.

In line with this consensus, the United Nations considers it necessary to take immediate measures to reduce possible climate changes, as well as present and research solutions to climate changes.

Today, international security has a defined agenda, which is security in survival. In this way, the attention of the people of the world

(to environmental problems and their connection with security of survival and national security, global policies and international relations) is increasing day by day.

Also, governments' concern about the security consequences of climate change has taken a more serious form in international forums. As the connection between climate change and security has increased the motivation to pay attention to the global environment.

Objectively and clearly, environmental changes have become an important factor in the spread of violent conflicts. Because the pressure caused by environmental destruction has contributed to regional and international instability and insecurity. And increase the possibility of conflicts and military conflicts. And they bring up the necessity of making collective decisions to solve these problems.

Contrary to the fact that the countries participating in the negotiations of the Security Council's climate change agenda have a consensus on the occurrence of climate change as a threat to international peace and security.

However, there are differences of opinion regarding how to deal with the dangers and the authority of the Security Council to investigate the threats of these changes. These differences are caused by the views of these countries.

**References:**

اخوان كاظمى مسعود وهمكاران(1398) مطالعه واكوى  
تأثير تغييرات آب و هوايى بر امنيت بين المللى، فصلنامه  
مطالعات روابط بين الملل، سال دوازدهم، شماره 6

افشارى مريم (1389) تأثيرات تغييرات آب و هوايى بر  
صلح و امنيت انسانى، پايان نامه دكترائى دانشگاه شهيد  
بهشتى، دانشكده حقوق

بورقی رضا(1388) تغییرات جوی و امنیت بین الملل، پایان نامه کارشناسی ارشد دانشگاه شهید بهشتی  
 جلالی محمودهمکاران(1397) تأثیر ابعاد زیست محیطی تغییرات اقلیمی بر امنیت ملی، علوم و تکنولوژی محیط زیست، دوره بیست و دوم، شماره نه  
 شمشیری، سیروس و رضا جعفری(1393) آشکار سازی و پهنه بندی ریز گردهای استان کرمانشاه با استفاده از تصاویر ماهواره ای MODIS فصلنامه بوم شناسی کاربردی، سال اول، شماره 8 .

فاضلی حبیب اله وهمکاران(1395) بررسی تغییرات اقلیمی به عنوان تهدیدی جدید علیه صلح و امنیت بین المللی در دوران پس از جنگ سرد، راهبرد اجتماعی فرهنگی، دوره 5 , شماره 21  
 کاویانی راد، مراد(1390) پردازش مفهوم امنیت زیست محیطی(رابطه امنیت و اکولوژی، فصلنامه ژئوپلیتیک، سال هفتم، شماره 1  
 موسوی سیدفضل الله، میرمحمدی معصومه(1392) تغییرات جوی: تهدیدی علیه صلح و امنیت بین المللی، مجله حقوقی بین المللی، شماره 49

### English references:

Buzan, Barry ,1991, People, states, and fear: an agenda for international security studies in the post-Cold War era, New York, Harvester Wheatsheaf  
 Beck, Ulrich (2006) ‘Living in the world risk society’, Economy and Society, 35:3, 329–345  
 Diehl/Gleditsch (eds.), “Environmental Conflict”, Boulder 2001; H. Dixon, “Environment, Scarcity and Violence”, Princeton 1999; Barnett, The Meaning of Environmental Security, Zed Books 2001.  
 UNEP, Sudan: Post-Conflict Environmental Assessment, 2007, p. 84, available at: [http://postconflict.unep.ch/publications/UNEP\\_Sudan.pdf](http://postconflict.unep.ch/publications/UNEP_Sudan.pdf)  
 M. Kimble, “Climate Risks and Security”, in: F. Dodds, Andrew Higham and Richard

Sherman (editors), “Climate Change and Energy Insecurity: The Challenge for Peace, Security and Development”, Earthscan, 2009, p.148.  
 NOVA, Dimming the Sun, A DOX Production for NOVA/WGBH and BBC, WGBH Educational Foundation, April 2006.  
 Saul, Ben (2009) ”Climate Change Conflict and Security: International Law Challenges “. New Zealand Armed forces Law Review, vol 9  
 Wisner, Ben., Fortham, Maureen., Kelman, Ian., Johnston, Barbara Rose., Simon, David., Lavell, Allan., Brauch, Hans Gunter., Spring, Ursula Oswald., Wilches-Chaux, Gustavo., Moench, Marsul & Weiner, Daniel. (2007), Climate Change and Human Security, 15 April, at: [Html & http://Www.radixonline.org/cchs.doc](http://Www.radixonline.org/cchs.doc)