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## Environmental Security: Regional Cooperation, Development and Armed Conflict in the Persian Gulf

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**Abstract:** This article presents the key insights about the environment and security links in the context of the Persian Gulf region. This research paper focuses on the challenge of finding a balance among development, armed conflicts and environmental degradation in the Persian Gulf region. Environmental security challenges are human security, sustainable development and regional cooperation in the Persian Gulf. As such, analysis of environmental security needs to focus more on different levels and discussed the human security and sustainable development based on their aspects in common and also investigated the cooperation opportunities in the Persian Gulf in the orientation of environmental security fulfillment. The methodologies of the study are: A historical interpretation, critical studies, casus belli, environmental political approach and content analysis. Consequently, by a closer look, it is clear that both paradigms discuss similar issues. Remarkable similarities such as environmental security are seen between them that emphasize on common policies, economy, society, and environment. Continuing environmental degradation requires long-term regional cooperation that addresses the problems of rapid development, armed conflict, unsustainable development and rising demand for energy and other resources. Regional cooperation on environment is a chance for the regional countries in the Persian Gulf for a convergence to prevent armed conflicts and pay more attention to the sustainable development and human security instead.

**Keywords:** Armed Conflict, Development, Energy resources, Persian Gulf region and Regional cooperation.

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### Introduction

Human societies have an unprecedented ability to alter natural systems in twenty-first century. While these abilities are by no means uniform, growing populations and attendant resource needs, progressive technological advancements, and escalating economic developments have leant disparate peoples around the world the capacity to lastingly affect the stability of natural systems. Since many of these natural systems underwrite

the technological and economic progress that humankind has wrought throughout previous centuries, their alteration creates unique and at times pressing challenges and threats, brief explorations into contemporary patterns of demography, along with the threats facing essential natural systems such as forests, oceans and the atmosphere (Kolbert, 2010:360).

Broadly speaking, challenge means any statements or actions which question or dispute

something (Blackburn, 2005). The existing energy resources in the Persian Gulf have such a value that environmental security threats are not able to influence the decreasing significance of the region. Moreover, outsider countries do not ignore this region because of the energy resources. Since the early new millennium, due to the geopolitical and Geo-economic importance of the region, the Persian Gulf region is seen as one of the most important and crucial regions in the world. The extreme dependence of the consuming countries and outsider countries, on the one hand, and conflicts among the countries in the region, on the other hand, caused challenges in energy resources, political, legal and social conflicts as well. These conflicts caused armed conflicts and environmental security threats in the region (Kaviani Rad, 2011: 80-100). However, the current debate came basically as a result of developments after the 1980. In fact, since the decade of the 1980s, the Persian Gulf basin witnessed the emergence of ideas of development and war (Mallahi, 2011: 52-62).

The most momentous studies on this issue were studies by Thomas Homer-Dixon (1991, 1994, 1999; Homer-Dixon/Blitt 1998, Homer-Dixon/Deligiannis) and his associates at the University of Toronto. In Switzerland, interdisciplinary studies (e.g., Günther Bächler, 1998; Bächler and Karl Spillmann, 1996, 1996a, 1996b, 2002) have targeted environmental conflicts that brought environmental analyses and developmental issues. While the Canadian group conducted a study on the relation between environmental scarcity, degradation, and conflict, the Swiss group discussed both environmental scarcity and degradation as causes of environmental conflict as well as matters of conflict resolution outcomes (Brauch and Mbote, 2009). Environmental security issues are generally and indirectly sub-classified as a part of international security studies and national security because of this presupposes that a dramatic rise in pollution and conflict a substantial fall in human

environmental quality are clear threats to the security and survival of humanity society. Moreover, environmental security risks is inevitably an international issue and the spread of its harmful impacts beyond the national borders is of a great importance (Homer-Dixon, 2002). Common elements of environmental security definitions include: public safety from environmental dangers caused by natural or human processes due to ignorance, accident, mismanagement, or design; amelioration of natural resource scarcity; maintenance of a healthy environment; amelioration of environmental degradation; and, prevention of social disorder and conflict (promotion of social stability) (Mallahi, 2013). Environmental security issues are generally and indirectly sub-classified as a part of security studies because of this presupposes that a dramatic rise in pollution and a substantial fall in human environment quality are clear threats to the security and survival of humanity society (Mandel, 2008: 103).

In this study, with a critical approach, the researcher is seeking to discover the issues linked to environmental security challenges in the region. The article has neither the space nor the mandate to present the detailed arguments, methodological modalities, or analytical particularities of the various cases; the goal is merely to highlight the key lessons at a conceptual level here. Before presenting conclusions specific to the Persian Gulf, however, the article will introduce a conceptual framework for organizing environmental security discussions. This conceptual framework will be followed by a discussion of the nexus between environment, development, cooperation and human security in the Persian Gulf. This article focuses on the challenge of finding a balance among development, armed conflicts and environmental degradation in the Persian Gulf and assesses the role of regional institutions in dealing with this issue. Environmental security challenges are human security, sustainable development and regional cooperation in the Persian Gulf. Paper will

focus particularly on the currently emerging interest in looking at environmental security issues from the perspective of human security and embedding those issues within the concept of sustainable development and regional cooperation.

### **Methodology**

A methodology is usually a guideline system for solving a problem, with specific components such as phases, tasks, methods, techniques and tools. This essay based on some disciplines, such as: environmental policy, political science and international relations. To employ in an accurate academic research on environmental security, it is necessary to develop an interpretive analysis of the security phenomenon. The methodological strategy used in this works to characterize environmental security and determine if it is possible to create a pathway for the regional cooperation future with effectiveness will be a mixed methodical strategy. The methodologies of the study are: A historical interpretation, critical studies, casus belli, environmental political approach and content analysis. Political science research already is beginning to reflect interest in sustainability as a concept and the value of the comparative and international study of environmental policy and politics. There is also greater recognition of the importance of interdisciplinary analysis to capture the full range of variables that can affect environmental policy adoption, implementation, and impact at all levels of government (Kurian et al., 2010).

### **Outsiders History in the Persian Gulf Region**

The history of outsiders (Portugal, Dutch, Britain and United States) in the Persian Gulf region is reviewed from the earliest possible references to the 16th century. Outsiders chose to occupy areas of influence in the Persian Gulf according to Imperialism designs. The economic advantages of the region due to the abundant energy resources

(oil and gas) and also the geographical situation increased the importance of the Persian Gulf region and attracted the outsiders. The energy resources will be to continue to violent conflicts by the outsiders in the Persian Gulf region in 21th century (Mallahi, 2013).

The Persian Gulf has always been a key international trade route connecting the Middle East to India, East Africa, Southeast Asia, and China. Its orientation was outward, toward the Indian Ocean, and its coastal society reflected this. The Persian Gulf during the period of human history has been the center of attention of various ethnicities. The Persian Gulf region has been always considered by outsiders because of some of its unique features and one of the world's important strategic, geopolitical and economic areas. The lessons of history are seldom clear and often deceptive. The Persian Gulf has strategic, geopolitical and economic significance in the Middle East and it is a key energy resource of the world. It has even been the location of a revolution and the presence of outsiders has been affected three major wars at the end of the twentieth century and influence in the area according to Imperialism designs. It may well be the area of future violent conflicts for the existence of petroleum resources (Ramachandrapa & Mallahi, 2013: 105-123).

### **Energy Resources**

During the recent years, because of its relation to the political situation it generally internationally discusses a lot about energy security. The role and importance of the energy resources resulted in most of the conflicts in the world. Because, without energy resources there will be no development in industry. The increasing dependence of different fields of economics on energy resources made them the most important factor in economic growth and development process. The existence of the largest oil supplies -which is the reason of conflicts according to experts- in one of the most

unstable regions i.e. the Middle East, caused the energy security to be more noticeable in energy literature. However, from the viewpoint of outsider countries, more security in Persian Gulf means security for energy consumers than energy producers. These outsider countries have been always planning their own policies based on this security concept (Pashang, 2010).

From the view of energy diplomacy, security in a nation increases if only the security of all the nations is promoted. This viewpoint focuses on integrating the world economy which is focusing on changing the pattern of wealth distribution and world power. It is making an attempt to represent the energy relations as a unified mechanism through which a full-scale cooperation of exporters, importers based on a win-win game is imaginable.

Due to the geopolitical and geostrategic condition, the Persian Gulf has always been focused by the outsiders. The increase in consumption and at the same time a decrease in the oil supplies in other places, promoted its importance as the most major energy supplier in the world. A study on the distribution of the world's oil supplies clearly illustrates the aggregation of these resources in the Persian Gulf region. Statistics regarding the world's oil supplies show that about 728 out of 900 billion barrels of the world's proved oil supplies is centered in the Persian Gulf (U.S Geological Survey World Petroleum, 2008).

According to the statistical issue (BP), although the proved supplies for the countries in the OECD decreased from 113/7 to 72 billion barrels (1980-2007), the OPEC supplies in the same period increased from 432/8 to 819 billion barrels and among these the most excavations occurred in the Persian Gulf. On the other hand, based on the reports by the U.S. Energy Information Administration (EIA), the oil price will increase in the next two decades and the exploitation will raise from daily 82 million in 2010 to 125 million in 2025 and the consumption in the U.S. will increase

from 21 million to 29 million barrels. In such a situation the need for the U.S. for the daily imported oil will increase to the extent that in 2025 the produced oil by America will only cover 30 percent of the United States' demands. Therefore, the United States will have to import 20 million barrels of oil a day (U.S Geological Survey World Petroleum, 2008). OPEC's proven oil reserves currently stand at 1,200.83 billion barrels in 2012 (OPEC, 2013).

The increase in the importance of the Persian Gulf region in producing the world energy is because of factors as follows:

1. Increase in consumption and as a result increase in crude oil demand.
2. Reduction oil supplies in the regions such as the North Sea, Central America, and Caribbean region.
3. Drastic energy consumption in great countries like India, China, Brazil which is predicted to be more in future.
4. Lack of no suitable substitute for oil having at least two characteristics of being low in price, being abundant and producing more energy than oil.
5. Lack of fulfillment in predictions of discovering oil in Russia, Caspian region Africa and even the South Pole (Abbasi, 2012).

There are several reasons for the importance of this region:

1. One of the important factors for the security in this region is its rich supplies. The importing countries make sure that this region can provide their energy for a period of time.
2. The existence of establishments and infrastructures especially the presence of technological infrastructures in exploiting and refining energy.
3. Cheap and simple extracting of energy in the region.

4. Access to the open waters and easy transportation of energy in region.
5. The high quality of energy compared with other parts of the world (Ajili, 2012).

Because of these situations, the energy security issue is very crucial for the U.S. and other consuming countries and achieving reliable and cheap oil is of great importance for them. From this point of view, the destiny of the U.S. and other consuming countries is linked to the Persian Gulf as the richest geographical situation in oil supplies in the world. This emphasizes the importance of the Persian Gulf in producing the world energy and international economy. Development of exploitation establishments, refinery, loading, and violent conflicts in the region to attain the energy supplies have been the most important challenges for the regional security.

### **Environmental Security Threats**

The environmental degradation and industrial development trends have brought threats to the Persian Gulf security. Argues in favor of a revised framework of security that includes environment as a key determinant, The conceptual linkages between environmental degradation and security through several theoretical viewpoints. It also establishes a link among threats of current development to environmental security in the Persian Gulf region. This linkage helps to understand the relationship between environmental degradation and security threat. Critical approaches, discuss the outcomes related to development and their impacts on the Persian Gulf environment which can lead to security threatening (Zare pyrhajy & Mallahi, 2012). The Recent threats to the environmental security pertaining to development trends in the Persian Gulf consist of population growth, building ambitious coastal mega-projects, hydrocarbon pollution, fishery resources, fresh water, desalination, wastewater and harmful

algal blooms (Ramachandrappa & Mallahi, 2013: 105-123).

The causal relationship between environmental security - energy resources (oil and gas) - and the outbreak of armed conflict is complex. Environmental security emerges within the reduction of energy resources context and interacts with this contextual factor to contribute to armed conflict. Within Persian Gulf, wars had arisen at precisely with goal to achieve energy resource since 1980. The paper provides a new perspective on these events by analyzing the link between the Persian Gulf's environmental security and armed conflicts. To prevent armed conflicts and their related impacts on environmental security, regional and international organizations' collaborations are required because the continuation of these kinds of conflicts will certainly lead to environmental, humanitarian, and security tragedies in the region (Ibid).

### **1. Current Development Trends**

Mineral and marine resources have led to the coastal region development. But, on the other hand, this development caused environmental problems and security threats in the region as well. The researcher made an attempt to spot the related links regarding the impact of developmental threats on environmental security in order to help settle the environmental problems and reduce the environmental security threats by proposing the governments in the region to establish a regional organization to prevent risks to the environment, national security, human security and to stop environmental conflicts as well.

Environmental security will be as an increasingly important concern of governments and their defense establishments because of several trends that have the potential for threats in the Persian Gulf. Environmental security examines the threat posed by environmental events and trends to individuals, communities or nations. It may focus on

the impact of human security, national security and international relations on the environment, or on how environmental problems cross state borders. It involves and reflects the ability of an entity, whether a nation or a society, to withstand environmental degradation, environmental risks or adverse changes, or environment-related tensions or conflicts (Mallahi, 2013).

Hence, altered resource availability will imply food shortages which will then cause political disputes, ethnic tension, and civil unrest which can itself endanger the national security of the countries in the region. The links pertaining to the Persian Gulf environmental security are composed of: The population growth and rapid development had a heavy pressure on the coastal region's ecosystem, especially in the smaller countries such as Bahrain, Kuwait, Qatar, and United Arab Emirates.

The coastal expansion projects with its high demands of environmental expenses and even costal extension itself which definitely causes degradation and destruction of the natural environment, will in the long term, affect negatively on the health of Persian Gulf dwellers, particularly in Kuwait, United Arab Emirates, Bahrain, and Qatar.

The developmental activities to obtain hydrocarbon materials namely extraction, transportation, oil spills, fire, and incidents are the most important polluting factors for the air and sea which affect the respiratory and immunity system of all living things. The major victims will be the dwellers in the region.

Marine resources exploited in the past 20 years created problems in the developing regions and brought about a dramatic fall in fishery species.

Overexploiting the groundwater springs due to the rapid population growth and processing industries has resulted in water saltiness, water shortage, and risks in water security in the region except Iran and Iraq.

For the purpose of rapid development in the coastal region's major chemical fertilizer production industries, petrochemical minerals, power plants, and desalination plants have been established which subsequently leads to the production of industrial and domestic water waste in the Persian Gulf coastal cities.

The threats regarding the fish death and producing poison by toxic algal blooms which also decreases the light penetration in the sea, can enter the food chain can influence the marine ecosystem.

The most recent important threats to the environmental security pertaining to development in the Persian Gulf consist of population growth, building ambitious coastal megaprojects, hydrocarbon pollution, fall in fishery and freshwater resources, raise of wastewater and harmful algal blooms (Ramachandrapa & Mallahi, 2013: 105-123).

The satisfaction of human needs and aspirations is the major objective of development. The essential needs of vast numbers of people in developing countries for food, clothing, shelter, jobs are not being met, and beyond their basic needs these people have legitimate aspirations for an improved quality of life.

A world in which poverty and inequity are endemic will always be prone to ecological and other crises. Sustainable development<sup>1</sup> requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life.

1. The term 'Sustainable development' was initially used in the early 1970s in the field of environment and development. After the Rio de Janeiro conference in 1992, the use of this term has been widely common in academic fields. The sustainable development is still a controversial concept. There are different organizations and theories for concept in the line of criticizing the present condition and based on different approaches, different definitions of sustainable development have been presented. While some scholars know it as a link between environmental insight and development, some others believe that sustainable development means that economic growth, environment, and human society are complementary not competitive. One thing in common in all the definitions is that environmental protection is seen as a basin for development which will be achieved through the interaction among the three main elements of sustainable development namely economic, social, and environmental development. Wherever the action and reaction balance among the elements is disturbed, sustainability is fragile. All said, today, sustainable development is seen as a major goal in the growing world filled with tension and problems (Kamali, 2011).

Growth has no set limits in terms of population or resource use beyond which lies ecological disaster. Different limits hold for the use of energy, materials, water, and land. Many of these will manifest themselves in the form of rising costs and diminishing returns, rather than in the form of any sudden loss of a resource base. The accumulation of knowledge and the development of technology can enhance the carrying capacity of the resource base. But ultimate limits there are, and sustainability requires that long before these are reached, the world must ensure equitable access to the constrained resource and reorient technological efforts to relieve the pressure (Aghili, 2009).

As for non-renewable resources, like fossil fuels and minerals, their use reduces the stock available for future generations. But this does not mean that such resources shouldn't be used. In general the rate of depletion should take into account the criticality of that resource, the availability of technologies for minimizing depletion, and the likelihood of substitutes being available. Thus land should not be degraded beyond reasonable recovery. With minerals and fossil fuels, the rate of depletion and the emphasis on recycling and economy of use should be calibrated to ensure that the resource does not run out before acceptable substitutes are available. Sustainable development requires that the rate of depletion of non-renewable resources should foreclose as few future options as possible. Development tends to simplify ecosystems and to reduce their diversity of species. And species, once extinct, are not renewable. The loss of plant and animal species can greatly limit the options of future generations; so sustainable development requires the conservation of plant and animal species (Mitchell, 2008).

Therefore, environmental security threats are in connection with sustainable threats because by changing the renewable or non-renewable resources it can affect a region's ecosystem, environmental pollution, and rapid population growth.

This issue can bring violent conflicts and dissatisfaction in the future.

The environmental security threats in regards to sustainable development in the Persian Gulf region are as follows:

1. Increasing the production potentiality without guarantee for fair opportunities for all needs especially healthy environment.
2. Dissatisfaction of regional civilians with environmental protection by regional governments to improve life quality.
3. Rapid population growth without water distribution coordination.
4. Excessive exploitation of natural and energy resources by regional countries without considering the essential needs of future generations and technological development.
5. Physical ecosystem changes and genetic damages resulted by rapid development in the region without considering its potentialities.
6. Air and water pollution and groundwater shortage as a result of development and war in the Persian Gulf region resulted in sustainability in development as one of the conflicts related to environmental security since 1980 which can be a threat to health and the environment of the region.

The idea of protecting the environment especially seas and oceans and international, regional, and coastal waters is applicable in all the countries under the logic of their interests and safety of the sea routes. Without international and regional cooperation, sustainable development and human security in the Persian Gulf region will not be attainable as it seems most crucial and vital in the recent years.

The protection of environment against other fears and concerns has been introduced in the late second and early third millenniums. A global and regional decision by countries and international

organizations is required for the fulfilment of this important issue (Aghili, 2009).

## 2. Armed Conflicts

There is a significant relationship between the environmental security threats and the impacts armed conflicts in the Persian Gulf. We investigate the influence of armed violent factors on environmental security in the Persian Gulf, and argue that energy resources played a role in a generating armed conflict. The causes of wars within the Persian Gulf is relatively novel. Much of the commentary focuses on environmental threats include of the impacts of Depleted Uranium and Oil Spills and Well Fires of wars in the Persian Gulf since 1980. It is impossible to establish the counter-factual argument that, in the absence of severe environmental security, the upsurge of armed conflicts in the early 1980s would not have occurred. The data available are simply adequate for such proof. Moreover, energy resources are always enmeshed in a web of environmental security threat factors, and its contribution to armed conflicts is difficult to disentangle from these other factors. Scarcities of energy pushed up grievances and helped alter opportunities for armed conflicts action by insiders and outsiders in the Persian Gulf to achieve energy resources. Therefore, although the role of energy resources is complex, we maintain that reduce contributed to wars in the Persian Gulf. In addition, we have argued that analysts must understand the relationship between the environmental security and energy resources if they are to understand the complex links between environmental security and armed conflict. The Persian Gulf environment needs regionally and international organizations' care to protect it against destruction because the prolongation of armed conflict will bring nothing but environmental and human and security tragedies (Mallahi& Ramachandrapa, 2013: 105-123).

## Human Security in the Persian Gulf Region

During the past decade, much research has focused on environmental challenges as a cause or amplifier of social conflict, and much attention has been given to integrating environmental concerns into conventional security policy. In this paper, the authors discussed the human security and sustainable development based on their aspects in common and also investigated the cooperation opportunities in the Persian Gulf in the orientation of environmental security fulfillment.

Human security evolved as a new security concept at the end of the Cold War because of two major reports. Shifting the focus from the national, international, and global 'state-centered' perspectives to 'people-'or 'human-centered' caused the concept of security to expand and started to focus on the state was questioned by including the individual human being, societies, and communities as modern reference objects. Since the late 1990's two different concepts were promoted in the political realm. The governments of Canada, Norway, and the European members of the Human Security Network (HSN) preferred a narrow concept focusing on 'freedom from fear' that dealt with humanitarian initiatives and human rights (Brauch, 2009).

There is an increasing use of the environment as a weapon of war. Examples include the purposeful discharge of oil into the Persian Gulf during the Gulf War, Iran-Iraq war and the destruction of irrigation systems during conflicts in Somalia. Much of the research on the linkage between environment and human security has focused on developing countries. There is a perception at least that these countries will be most adversely affected by environmental change. While this hypothesis is highly plausible, environmental change and human security appear to be closely linked in many developed countries and post-Communist transition countries as well. During this same period, a very different perspective the

ecological world view has also gained clarity and become influential in many parts of the world. It contends that humans are recklessly transforming and destroying nature on a grand scale. Its front line objective is to secure the environment from the unprecedented threats posed by uncontrolled human activity.

Of course not everyone agrees that human-generated environmental change is pervasive and serious, and that responding to it requires a fundamental transformation in our worldview. People disagree on the extent and significance of human generated environmental change, the sorts of challenges it poses, the trajectory it is on, and the response that is desirable and sufficient. However, insofar as the relationships between environment and security are concerned, one need not limit one's focus to the particular interests of sovereign states or extend it to encompass the welfare of the planet's whole complex web of life. The concept of "human security" offers a third perspective that allows us to move beyond conventional security thinking, appreciate both the local and global dimensions of the many insecurities experienced by real individuals and groups, and identify useful ways of linking security and development policies.

It is a great irony that many of the threats we face today are the unintended consequences of our efforts to enhance the human security and welfare of humankind. Unfortunately, our efforts have involved in the Persian Gulf:

1. Extracting resources (such as fish, fresh water) faster than they can be replenished.
2. Loading toxic and other waste materials into our land, sea, water and air faster than they can be broken down and neutralized.
3. And drastically modifying large ecosystems (from coral reefs) such that they can no longer support many species or effectively provide important environmental

services such as climate control (Party, 2000).

Wars have led to environmental threats in the Persian Gulf. Thus, human security requires fundamental changes in regional and outsider countries political priorities in the Persian Gulf. Due to environmental security threats, the regional human security has been put at risk. This happened by the regional and outsider countries in order to have an achievement on main strategic resources in the region. Lots of these threats which we encounter are intentionally or unintentionally due to countries' decision to increase their people's welfare and security by exploiting their resources which in turn resulted in the distribution of toxic in the region with their effects on the next generations.

### **Regional Cooperation for Security of the Persian Gulf Region**

The Persian Gulf region is one of the strategic and geopolitical areas in the world and the centuries before the time of civilization in Mesopotamia, has known as a commercial waterway, and has had military importance. History of the Persian Gulf countries is a story of conflict, competition and controversial lessons. The Persian Gulf region is one of the main sources of the global energy supply, and it has the geopolitical and geostrategic role in creating world order and global security.

The idea of regionalism is dated back long in the history but this form of modern issue has started since World War I and International Community establishment. In the last decade the world has experienced different kinds of regionalism. Between the period of the two world wars, because of legal ambiguities especially in the acts by the International Community and lack of strong modern structure, regional attempts were not as fruitful. The presence of the UN in the world focusing on regions and regionalism paved the way for the legal establishment of regionalism

movements. With the emergence of the Cold War and subsequent crises in security which was developed by the U.N. Charter, resulted in the formation of large unions based on mechanisms for regional security which itself led to the establishment of economic cooperation institutions. With the collapse of the bipolar system and moving toward new system, regions have changed to be internationally of great importance. Moreover, a great deal of conflicts which were hidden during the Cold War started to emerge (Lake & Morgan, 1997).

Region can be considered as a combination of geographical proximity, high degree of Cooperation, institutional frameworks, and common identity. In addition to the dimensions of foreign policy, geopolitics, and strategic, regionalism has been a basin for the development of cooperation and convergence in many parts of the world. In some cases, with efficient actions in the realm of regionalism and multilateralism bilateral conflicts have changed into "win-win" condition. Regionalism means focusing on a certain geographical area which is the best place of the fulfillment of goals and interest of the present parties. A region may be formed in the realm or beyond the borders of a government. Political elites' goals for regionalism are comprised of improved economy, communication development, direct relationship with neighboring countries along with consolidating their position as the leader of the region, etc. (Azarbijani, 2001: 49-69).

It can be claimed that through challenging the Westphalia system, modern regionalism helped both the formation of modern system and creation of irregularities. Modern approach in regionalism attempts to promote the universal values such as security, development, environmental sustainability more than Universalism (Langenhove, 2003).

Today, because of their roles in increasing the regional convergence, environmental cooperation patterns are applied in different parts of the world.

Northeast Asia is one of the best examples in this case. This region is one of the regions that in the 1980s and 1990s faced different problems such as air pollution (acid rain), marine pollution (oil and radioactive materials), migratory animals (aquaculture and fish). In fact, six countries in the region (China, Japan, North Korea, South Korea, Russia, and Mongolia) through cooperation could make their approaches on environmental issues close to each other and decrease their tensions to some extent (Valencia et al., 1991).

Semi-closed characteristic increased the amount of pollution in the Eastern Asian seas such as the Persian Gulf. Hydrocarbons, heavy metals, and agricultural or industrial chemicals are counted as the most pollutants in the region. The North Pacific is the most important region in producing fish and the countries in that region are highly dependent on fisheries. As an example, Japan and Korea produce 90 per cent of their fish from this region. Russia and China also respectively provide 30 and 10 per cent of their fish from this sea. The most important problem for these countries is the highly migration of fish from the east to the Western Pacific and Eastern Asia. The amount of fishery by the Eastern Asian countries also has always been one of the conflicts. Similar to this, in the Persian Gulf, the increase in the amount of fish catches and exploiting or accessing the energy sources have always been cases of environmental security threats among the countries in the region as well (Sand, 1992).

Having considered all the political, cultural, religious, racial, boundary and territorial problems among the regional counties and the cooperation of other foreign countries, it can be claimed that the only way to achieve sustainable development, human security, and ultimately the environmental security is to develop regional cooperation among countries regarding environmental issues. During the recent decades, the Persian Gulf countries have always tried to strengthen their cooperation through treaties and conventions. Kuwait conven-

tion (ROPME), Persian Gulf Cooperation Council, Economic Cooperation Organization (ECO), all reflect these countries' orientation toward regional contribution, convergence and establishment of regional organizations. However, the case is that despite these endeavors, the collaboration and convergence process in the Persian Gulf region was not as successful as it deserves. The convergence among countries have been encountering with crucial problems namely lack of preparation in governmental structures for convergence, conflicts among countries in the region, tribal or religious disagreements, emphasis on nationalism, and interference of other foreign countries in regional countries' policies (Mallahi & Salehi, 2011: 52-62).

### Conclusion

There is every indication, which the Persian Gulf will continue to play a crucial international role in the twenty-first century. It is vital for both outsiders and insider's better understanding the history of the Persian Gulf and to account for prevailing present-day attitudes about the region.

The environmental security will be at serious risk in the Persian Gulf region. Because the increasing exploits from the energy resources in this region has recently become more vulnerable. Furthermore, due to the environmental security threats such as rapid development and armed conflicts the Persian Gulf region's ecosystem has changed to be one of the most sensitive and vulnerable one in the world. In this essay, through studying challenges related to the existing environmental security, the investigator is making an attempt to create an opportunity for a convergence in the Persian Gulf region. Through increasing the convergence among the countries in the region, a sustainable development to prevent armed conflicts will be possible to attain in the region.

The environmental security threats related to rapid development and the occurrence of three

wars since 1980 put energy security, health security, food security and as a result human security in danger. Because of population growth, renewable resources such as fish, groundwater etc. are exploited faster than they are substituted and due to regional climate change, excessive oil pollution, and presence of other toxic materials in the sea, coasts, and air and also reformation in great ecosystems such as coral reef, a great deal of species especially fish as the main food of local people cannot be supported, depleted uranium, oil spills and well Fires of wars in the Persian Gulf. Therefore, due to lack of identification of proper methods regarding security policies and development by outsider and insider countries in line with human security caused not to be successful to stop creating fear in the Persian Gulf residents.

In such a condition, it seems that regional countries need to start the process of convergence from the non-sensitive points along with considering their mutual interests without the interference of global powers. Since the Persian Gulf region is strategically of great value and other countries outside this region are highly dependent on its energy resources, they will support every attempt made to improve the environmental security in the region. Protecting the resources and ecosystem in this region has always been one of the main concerns of the global organizations and member countries. Development in the collaborations among the regional countries regarding the environmental security can in the long term lead to the contribution in other fields such as economic, social, and political contributions. Real problem solving requires more action including better coordination and cooperation between the different institutions and organizations and tasks and measurements comprising effective enforcement tools.

The two paradigms of human security and sustainable development have been introduced after the armed conflict and rapid development by researchers in the Persian Gulf region. The envi-

ronmental security studies were created out of a need for a collective response to security threats, which were impacting on the stability of the region. Consequently, by a closer look it is clear that both paradigms discuss similar issues. Remarkable similarities such as environmental security are seen between them and both emphasize on common policies, economy, society, and environment. Continuing environmental degradation requires long-term regional cooperation that addresses the problems of rapid development, armed conflict, unsustainable development and rising demand for energy and other resources.

As it has already been mentioned, because of the abundance of energy resources such as oil and gas and its Geo-politic and Geo-strategic roles, the Persian Gulf region has an influential role in creating global order and security. Excessive exploitation from the energy sources has become an environmental security threat in the region and consequently its ecosystem has changed to be the most sensitive and vulnerable one in the world.

The Persian Gulf has even been the location of a revolution and the presence of outsiders has been affected three major wars at the end of the twentieth century and influence in the area according to imperialism designs. It may well be the area of future violent conflicts for the existence of petroleum resources. It has remained areas of unresolved and dangerous armed conflict involving the outsider powers, arms proliferation and ethnic and religious hatreds that go back centuries.

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