

THE WATER SECURITY MANAGEMENT AND ITS INFLUENCE TOWARDS INTER-STATE CONFLICT IN THE MIDDLE EAST REGION

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Abstract

Water is an irreplaceable element in the human life. Water security was always pursued by each country to ensure the prosperity of its people. But in fact, more than a third of the world's population needs of fresh water are not fulfilled, both for drinking and sanitation. So that's why water security management is urgent to implement. That problem was happened in the Middle East region until today. As we know that most of the Middle East region is composed from the barren desert. Although under the desert there are abundant of oil, but the water is a problem for most of the Middle East region. Middle East region needs a constant water supply approximately 127.5 billion cubic meters per year. Such conditions involve in water scarcity and inter-state conflicts caused by the water. Conflict in the struggle for water resources is difficult to avoid because the water needs in the Middle East region is bigger than the water availability. Those inter-state conflict involving various countries including Israel, Egypt, Jordan, Palestine, Lebanon, and Syria. Appropriate and equitable solutions should be formulated and implemented, such as making water management agreement which must be agreed by all countries. Because if not addressed, the seizure of water resources can be lead to high tension, conflict, or even war in the Middle East region. To elaborate the data, this research uses qualitative method, descriptive analysis approach, and emphasize on the literature study.

Keywords: *Water Security Management, Inter-State Conflict, Middle East*

Abstrak

Air adalah elemen yang tak tergantikan dalam kehidupan manusia. Sehingga ketahanan air selalu diupayakan oleh setiap negara untuk menjamin kesejahteraan

rakyatnya. Namun pada kenyataannya, kebutuhan air bersih lebih dari sepertiga dari penduduk dunia tidak terpenuhi, baik sebagai air minum dan sanitasi. Oleh karena itu manajemen ketahanan air sangat mendesak untuk diterapkan. Hal tersebut menjadi masalah utama yang terjadi di kawasan Timur Tengah sampai hari ini. Seperti kita ketahui bahwa sebagian besar kawasan Timur Tengah terdiri dari padang pasir yang tandus. Meskipun di bawah gurun terdapat minyak yang melimpah, namun mayoritas dari mereka memiliki masalah dalam ketersediaan air. Wilayah Timur Tengah membutuhkan pasokan air konstan sekitar 127,5 miliar meter kubik per tahun. Kondisi tersebut mengakibatkan kelangkaan air dan konflik antar negara. Konflik yang disebabkan air bersih sulit untuk dihindari karena kebutuhan air di kawasan Timur Tengah lebih besar dari ketersediaan air. Konflik antar negara tersebut melibatkan berbagai negara seperti Israel, Mesir, Yordania, Palestina, Lebanon, dan Suriah. Solusi yang tepat dan adil harus segera dirumuskan dan dilaksanakan, seperti membuat perjanjian pengelolaan air yang harus disepakati oleh semua negara yang berkepentingan. Karena jika tidak ditangani, perebutan sumber daya air dapat menyebabkan ketegangan tinggi, konflik, atau bahkan perang di kawasan Timur Tengah. Untuk menganalisis data, penelitian ini menggunakan metode kualitatif, pendekatan analisis deskriptif, dan menekankan pada studi literatur.

Kata Kunci: Manajemen Ketahanan Air, Konflik Antar Negara, Timur Tengah

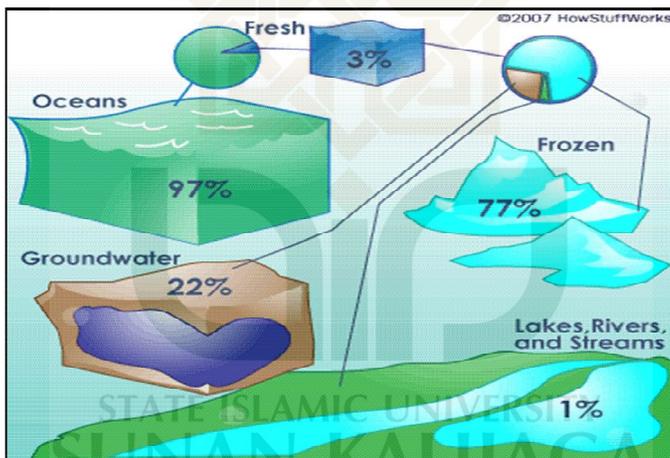
RESEARCH BACKGROUND

Water has an irreplaceable function in human civilization. As mentioned in the holy Qur'an surah Al-Anbiya: 30 that water are the origin from all organisms in the Earth. The existence of organisms, human in particularly, it turns out two-thirds of its physical weight is a liquid, either in the form of blood, saliva, and lubricating of bone joints and spinal fluid, all of which manage the temperature of the human body.¹ According to holy Qur'an surah Al-Baqarah: 22, indeed Allah SWT supplied water to drink of human, animal, and to grow the crop. But unfortu-

¹ Aishah Stacey, *Water and Sanitation*, Retrieved on November 1, 2015 from www.islamic-religion.com.

nately in the reality, more than a third of the human population in the world is not fulfilled its fresh water needs, both for drinking and sanitation or water-stressed countries.²

World Health Organization set a minimum standard amount of water that should be available to a healthy life is 2,000 cubic meters per year for each person. About 40 countries in the world are below the minimum standard. The lowest average is located at Middle East region and poor countries in Africa. For example, 88% of the population does not have clean water in Mali, while in Ethiopia reached 94%. In the Middle East region, about 9 of 14 countries are experiencing of water crises. In fact, approximately 97% of the water on Earth is sea water that is too salty for drinking, agriculture, and manufacturing. So that the fresh water on the Earth is just about 3%. Further, most of the water is not easily obtained, as shown by the following picture.



Picture 1. The World's Water Supply.³

Based on the picture above, we can see that composition of water in the world consists from ocean (97%) and fresh water (3%). Furthermore,

² Stockholm Environment Institute, *Understanding the Nexus: The Water, Energy, and Food Security Nexus*, Paper for the Bonn 2011 Nexus Conference, 2011.

³ Shanna Freeman, *How Water Works: The World's Water Supply*, Retrieved on September 28, 2015 from www.science.howstuffworks.com.

fresh water consist from ground water is (22 %), lakes, rivers and streams (1%), and frozen (77%). Thus we can see that the water issue is a very sensitive issue in human life. Water needs is not only in terms of quantity, but also quality. Physically, the standard of fresh water is colorless, tasteless, odorless, normal temperature and does not contain from the hazardous substances. The problem of shortage of water resources is exacerbated by population growth, urbanization, excessive water consumption, and climate change. If not managed properly, the water crisis can happen at any time. Water, especially fresh water, will become one of the scarcest resource for human and societies.⁴

Severe water crisis or water insecurity is expected to hit the Middle East region in the future.⁵ Shortly after the turn of the twenty-first century, the world found itself in the midst of remarkable resource commodity boom: investment and terms of trade in extractive industries were at record levels.⁶ At the same time, industrial and urban waste flows through the valley of Hebron-Avalon river, which flows from the West Bank through the Negev region in southern Israel to the Mediterranean region. This waste has damaged the environment and endangers the health of the people living in this area, thus adding to ongoing political tensions. For example, recently, an overflow of sewage from Israeli settlements in the West Bank resulted in contamination of the environment and agricultural land in Palestinian village. In the past, Jordan River flow had an average of 1.3 billion cubic meters of fresh water to the Dead Sea annually. Today, the condition had dropped become only 20 to 30 million cubic meters per year by shifting 98% of the river flow by Israel, Jordan and Syria for agricultural and household.

Lack of water flow into the Dead Sea is the main cause in the sea water receded quickly, in addition to mineral extraction on a large scale.

⁴ Jurian Edelenbos and Geert R. Teisman, *Symposium on Water Governance: Water Governance as a Government's Action between the Reality of Fragmentation and the Need for Integration*, (London: Sage Publication, 2010).

⁵ Mira Edelstein, *For the Middle East Peace, Water is More Important Than Oil*, Retrieved on September 25, 2015 from www.commongroundnes.org.

⁶ Jewellord N. Singh and France Bourgoquin, *Resource Governance and Developmental States in the Global Growth: Critical International Political Economy Perspective*, (New York: Palgrave Macmillan, 2013).

Water insecurity and water scarcity is only one aspect of the conflict in the Middle East region. Decision makers at national and regional levels coupled with a good management and planning of water resources is essential to the area of the Nile River, the Jordan River, the Dead Sea, and the groundwater source in coastal areas and mountains. Middle East region indeed has the largest oil reserves in the world, but this just disguise the fact that they mostly occupy a very barren, and rivers with little flow. While water demand increased as a result of population growth. As a result, underground water reserves shrinking and almost all dependent on imports that are traded at high prices. The water insecurity may have an impact on conflicts.

As we know, the Middle East is a region which full of security problems and conflict. Those security problems and conflicts in the Middle East are not only in the dimension of internal conflict, but also interstate conflicts, both among Middle East countries, or the involvement of non-Middle East countries. Various conflicts in the Middle East region is not only affects to the image of the Middle East region as a region which prone to conflict, but also affects to the political, economic, and international security and stability. If not addressed, it is feared will be lead to a larger conflict in the countries that most of its territory consist from arid desert. Therefore, the problem of water presents multidimensional social problems. At the micro level, the water insecurity resulting in anxiety because water has an important function in the affairs of human life, such as drinking, cooking, and bathing. While at the macro level, the water insecurity can cause dryness and thousands of hectares of agricultural land becomes harvest failure.

Thus it can be predicted that in the future the main geopolitical resource in the Middle East is water, not oil anymore. Or it can be said that the blue gold is becoming more important than the black gold. The problem can only be addressed if the countries of the Middle East began to share in the management of water resources. Unless there is a breakthrough technology or a miraculous discovery, the Middle East will not escape from serious water shortages. There are political relations between the soaring food prices with the demand for water and energy which also increases. Middle East region needs to collectively in address the issue of

water resources and conflict. Although the Arab-Israeli conflict is often became a barrier to the implementation of appropriate solutions for managing shared water. Seeing this phenomenon, the authors interesting to study about how are water security management and its influence towards inter-state conflict in the Middle East region.

THEORETICAL FRAMEWORK

1. Water Security Management

With the demise of the cold war, new concept of security that addressed not only the military realities of the contemporary world but also the political, economic and social realities were developed.⁷ Human security emphasizes the aspects of human welfare as security capital. This approach aims to improve the quality of human life from the aspects of economy, education, and health.⁸ One form of human security is about water. In the Millennium Development Goals, water security is an access to safe drinking water and sanitation, both of which have recently become a human right.⁹ The rapid population growth, in third world countries has been shrinking water supplies.¹⁰ Water security represents a unifying element supplying humanity with drinking water, hygiene and sanitation, food and ūsh, industrial resources, energy, transportation and natural amenities, all dependent upon maintaining ecosystem health and productivity.¹¹

Water security is the gossamer that links together the web of food, energy, climate, economic growth, and human security challenges that the world economy faces over the next two decades.¹² But in this article

⁷ Craig A. Snyder, *Contemporary Security and Strategy*, (New York: Palgrave Macmillan, 2008), p. 1.

⁸ Yohanes Sanak, *Human Security dan Politik Perbatasan* [Human Security and Political State Border], Yogyakarta: PolGov, 2011), p. 25.

⁹ United Nations of Economic and Social Affairs, *Governance for the Millennium Development Goals*, (New York: United Nations Publication, 2007).

¹⁰ Michael P. Todaro and Stephen C. Smith, *Economics Development in the Third World*, (London: Pearson Education, 2003), p. 525.

¹¹ United Nations Environment Program, *Sick Water: The Central Role of Wastewater Management in Sustainable Development*, (New York: United Nations Publication, 2010).

¹² World Economy Forum Water Initiative, *Water Security: The Water-Food-Energy-Climate Nexus*, (Washington: Island Press, 2011).

we will talk more about water insecurity in the Middle East region. So, if we are talking about water insecurity, it is clear that the definition of water insecurity is contrary to the definition of water security. Water security analysis of this kind are entirely possible without asking what kind of role water plays outside to the sphere of geopolitics, its national, regional, or local personal specificity.¹³ Water security management is an attempt to manage access to safe drinking water and sanitation in order to keep awake the water sustainability. In the Middle East region, water security management is also a means or instruments to avoid inter-state conflicts.

2. Inter-State Conflict

Conflict is a social phenomenon that is completely present in social life, so that conflict is inherent. It is mean that conflict will always exist in any space, anywhere and anytime. Conflict is a natural and normal thing that arises because of differences in perceptions, goals or values in a group of individuals.¹⁴ Ibn Khaldun in *Muqaddimah*, implicitly views the conflict as something that does not stand alone. Ibn Khaldun thought that conflicts born from the interaction of individuals and groups in various forms of activities of social, economic, political, and cultural.¹⁵ According Johan Galtung, conflict is assumption + behavior + contradiction. Conflict is a triangle construction.¹⁶ Water conflict is a term describing a conflict between countries, states, or groups over an access to water resources.¹⁷ The water conflict is divided into two, namely intra-state (domestic) and inter-state (between states). The prefix "inter" usu-

¹³ J. Peter Burgess, "Non-Military Security Challenges", In *Contemporary Security and Strategy*, ed. by Craig A. Snyder, (New York: Palgrave Macmillan, 2008).

¹⁴ Paul Scannell, *Conflict and Soldiers' Literature in Early Modern Europe: The Reality of War*, (New York: Bloomsbury Academic, 2014).

¹⁵ Hakimul Ikhwan Affandi, *Akar Konflik Sepanjang Zaman: Elaborasi Pemikiran Ibn Khaldun* [The Roots of Conflict in All Period: Elaboration of Ibn Khaldun's Thought], (Yogyakarta: Pustaka Pelajar, 2004), p. 73.

¹⁶ Johan Galtung, *Studi Perdamaian: Perdamaian dan Konflik, Pembangunan dan Peradaban* [Peace Studies: Peace and Conflict, Development and Civilization], (Surabaya: Pustaka Eureka, 2003), p. 160.

¹⁷ Patricia Kamari-Mbote, *The Water, Conflict, and Cooperation: Lessons from the Nile River Basin*, (Washington: Woodrow Wilson International Center for Scholars, 2007).

ally means between and the prefix intra usually means “within.” So, an inter-state conflict would be a war between two countries.

Inter-state conflict is at least two participants in sustained combat should qualify as members of the interstate system and there should be at least 1000 battle related fatalities among all of the system members involved. The care is given to delineate battle deaths from massacres. Conflicts that do not reach this fatality criterion are considered to be sub-war. A conflict situation which occurs between two or more states is considered to be an interstate conflict. It is these instances of conflict for which the contemporary international system, as represented in the operations of the United Nations, was originally designed to address. However, in recent years, the majority of conflicts commanding international attention have occurred within rather than between states in the Middle East Region.

3. Middle East Region

Geographically, the definition of the Middle East is not so clear. Middle East term tends to refer to cultural domain, so it has no any certain borders. But historians agree that is the Middle East is a region between the Nile Valley until to the Muslim lands in Central Asia, or from the southeastern Europe until to the Indian Ocean. Middle East has long been known as the crossroads of the so-called Old World or the Afro-Eurasia. Therefore the area is also known by many nicknames, some of which are country of birth divine religions.

A Muslim country in Asia that is in it is often referred to as the Near East and parts of Asia especially commonly referred to as West Asia. There are also those who say that the Middle East is a region that is located around the Persian Gulf. However, there is no consensus on the definition of the Middle East region. Countries often regarded as the Middle East is the Arab and non-Arab Egypt, Iran, Iraq, Jordan, Lebanon, Palestine, Syria, Israel, Bahrain, Kuwait, North Yemen, South Yemen, Oman, Qatar, Saudi Arabia, United Arab Emirates. Countries sometimes considered Middle Eastern countries are Cyprus, Greece, Libya, Turkey, Afghanistan, and Pakistan.¹⁸ Strategically the Middle East has tradition-

¹⁸ Ron David, *Arab dan Israel Untuk Pemula* [Arab and Israel for the Beginner], (Yogyakarta: The Resist Book, 2006).

ally been the most important area, so that anyone who dominates it will have a strategic position in the world, its unique geopolitical and geostrategic which recognized by major countries.¹⁹

RESEARCH METHOD

This research is use qualitative method with descriptive analysis approach. Qualitative method is the chosen type for this research as a set of non-statistical inquiry techniques and processes used to gather data about social phenomena.²⁰ Data collecting method are the strategic step in the research. Data collection techniques used in this research is used related text and document. Document both historical and contemporary is mean to obtain or to get accurate theories and references regarding data of the result findings by studying relevant rules, regulations, reports, documents and literatures.²¹ Text and document are not only produced, but also, in turn, productive.²² Related text or document is like act, regulation, statistic data, prior research and etc. In this paper, a data analysis technique is using interactive models by Miles and Huberman. Data analysis techniques of Miles and Huberman consist from four activities, namely: data collection, data reduction, data display, and conclusion.²³

DATA INTERPRETATION AND ANALYSIS

Former 6th UN Secretary General from Egypt, Boutros-Boutros Ghali was revealed that the next war in the Middle East will be over water, not politics.²⁴ As we know that most of the Middle East region is composed of a barren desert. Although under the cluster of sand con-

¹⁹ George Leoczowski, *The Middle East in the World Affair*, (New York: Cornell University Press, 1980), p. xxiii-xxv.

²⁰ David E. McNabb, *Qualitative Research Methods: A Data Collector's Field Guide*, (Washington: Family Health International, 2005).

²¹ Keith F. Punch, *Introduction to Social Research: Qualitative and Quantitative Approach*, (London: Sage Publication, 2004), p. 168.

²² Lindsay Prior, Using Documents in Social Research, In *Qualitative Research*, ed. by David Silverman, (London: Sage Publication, 2010), p. 101.

²³ Matthew B. Miles dan A. Michael Huberman, *Qualitative Data Analysis: A Source Book of New Methods*, (London: Sage Publication, 1998), hlm. 12.

²⁴ Jan Selby, "The Geopolitics of Water in the Middle East: Fantasies and Realities", *The Third World Quarterly Vol. 26 No. 2*, (2005). p. 341.

tained abundant oil, but water is a problem of its own for most of the Middle East region. Based on data disclosed turns the Middle East requires a constant supply of water at 127.5 billion cubic meters annually. With the inventory of that, there are only a few countries that have a large water source, namely Egypt, Jordan, Iraq and Sudan, while the others are relied heavily with the three countries above.

Moreover, almost half of the thirty three countries are expected to experience water scarcity by 2040 in the Middle East, the researchers said the World Resources Institute (WRI). A total of thirteen Middle Eastern countries, plus Palestine, predicted will face severe water shortages in the next twenty five years. Eight of them even rank the 10 worst, namely Bahrain, Kuwait, Palestine, Qatar, the United Arab Emirates, Israel, Saudi Arabia, and Oman. WRI researchers, who make up the rankings for 167 countries by measuring the availability of ground water, such as lakes and rivers, concluded that the Middle East at this time has become the region with the lowest water resistance worldwide. Betsy Otto, director of WRI's Water World, states that governments in many countries need to understand the potential threats related to water needs to prop up the economy, including rising demand due to population growth and climate change.²⁵

This condition results in increasingly water scarcity in the Middle East societies. Egypt and Sudan is the largest and longest track area of the Nile while the Iraqis to completely control the Tigris and Euphrates. The other three rivers is a small river that exists in other Arab countries where water is coming from, such as the Jordan River in Jordan. No wonder then that in the past there was war between Israel and Egypt for control of water resources of the Nile and the Jordan dispute with Israel that wants to control the Jordan River.

Water conflicts are difficult to remove because the water need in the Middle East region is bigger than water availability. Approximately 1.1 billion people do not have adequate access to clean water, while friction interest on water resources increases political tension and security. But

²⁵ Suryanto, *Kelangkaan Air di Timur Tengah Diperkirakan Memburuk* [Water Scarcity in the Middle East is Expected to Worsen], Retrieved on November 2, 2015 from www.antaraneews.com.

that does not mean the water conflict left just happened, but had to look for ways how to minimize them. Dispute the water problem is not easily described let alone solved. Local laws, national, international, commercial, environmental, and human rights make increasingly complex water issues. Broadly speaking, the water conflict is divided into two, the intra-state (within the country) and inter-state (between states).

Middle East is a region that has a strategic value in the global political map. Countries that are in the region are countries which are rich in oil. But the Middle East countries are quite vulnerable in the water supply. According to UNESCO, interstate conflicts currently happen in the Middle East, which has only 1% of the world's fresh water supply but should be shared by the 5% of the total population of the earth. It certainly is a potential conflict or even war. War is not only to get the black gold (oil), but also blue gold (water). Water conflicts are most evident at this point in the Middle East, like Israeli conflict with any Arabian country.

There are many studies that say that Israel wants to get water in the Middle East without buying. For example in Egypt, Israel seeks to implement the plan in a way to disturb the countries of the Nile flowed. Israel also attempted to incite Egypt and Sudan to reduce their water rations. In addition, Israel is also ready to steal the Nile water by digging wells near the Egyptian border. Basically Egypt and Israel intend to overcome political opposition shipping Nile water to Israel. To ensure flow of water, the engineers Israel suggested that the Nile will also supply the Arab population in Gaza, Negev and West Bank, the impact would make them captive Israel, as Egypt will be reluctant to cut off the water. Israel formulates it in "Yeor Plan" and has prepared cost estimates and technical details as well as studying the political impact.

In Jordan, the Israeli regime stole the water in the river Jordan and the effluent discharged to the south of the river. Israel recently installed a water pump and pipe diameter of 25 cm above the Jordan River and the water flow to the water treatment plants in Israel. In Palestine, this is precisely in Gaza. Israel has conducted drilling water wells, thereby reducing the supply of water on the ground surface. Then the water is transferred from the Gaza Strip into Israel. Major water problem in Gaza is averted the water supply to the residents of Gaza by Israel, and the

lack of public awareness of the importance of water and its use, as a result Palestinian water conditions continue to deteriorate and the quality continues to decline. In Lebanon, the Jordanian Professor of political science, Ghazi al-Rababah, said that Israel would first fight to win Litani River located on the northern border of Lebanon with Israel. Long before Israel was created in 1948, David Ben-Gurion, Israel's first prime minister saying that they should seize the Litani River. In Syria, Israel blocking Syria utilizes their water resources. Golan Heights is the main source of water flowing into the Jordan River and Lake Tiberius, which is the source of water to Syria, Jordan, and Palestine. That is the reason for Israel's refusal to give this region in negotiations with Syria, because the source of water.

Water Security Management in the frame of regional institute is a good resolution for water conflict in the Middle East region. The establishment of regional institutions is one way to harmonize the various national interests of each country in the region, especially related the water. This is because the regional institutions have the authority to limit each country's behavior based on rules and regulations that have been agreed. Therefore, it is expected the formation of a Middle East regional institutions, which focuses specifically on the problem of the limited quantity of water resources and a way out of this problem by not looking at the background of religious or ideological differences of the country.

The need for the establishment of joint institutions is based because of the interdependence between countries regarding the existence of water sources. Israel depends on the flow of water from the rivers that are owned by Arab countries. The security of the Arab countries also implicitly relies on the military activities undertaken by Israel. If an agreement has been reached between the Arab-Israeli, Israeli radical measures to control water resources in the region will stop due to the flow of water quantity and quality can be maintained and this of course will increase the stabilization of the Middle East regional security.

The provision also applies to the Arab countries. There should be no selfishness in the use of water resources could lead to conflict. Upstream countries like Egypt should not just think about national interests, but also have to think about the national interests of downstream

countries which also need adequate water supply. The core of this is the establishment of regional institutions to establish a mutual trust among countries in the Middle East region to work together to manage the quantity and quality of water resources available in order to prevent shortages and conflicts of water. This cooperation can use the principles of hydro-politics, one of which is to implement the Unlimited Regional Integrity theory. It means that the state is not entitled to change the quantity and quality of available water flowing into the territory of other countries. Based on the above explanation, it is clearly why water insecurity can emerging conflict or moreover war in Middle East region. Once again, it is because water is an irreplaceable element in human life and water security was always pursued by each country to ensure the prosperity of its people.

CONCLUDING REMARK

Middle East region can never be separated from political issues both domestic scale, regional and international levels. More precisely is always full and the birth of political surprises. Ironically, the geographical conditions of potential reality are not directly proportional to the political convenience of the region began long ago. One of the problems was triggered by water insecurity. It's predicted that the chronic water crisis would be happen in the Middle East countries. As we know, the Middle East is a region full of security problems and conflicts. Such conditions require appropriate and fair resolution for all countries. But the Arab-Israeli conflict is often a barrier to the implementation of appropriate solutions to manage shared water. There are many studies that say that Israel wants to get water in the Middle East without buying. There are some countries that became the target of Israeli water theft, including Egypt, Jordan, Palestine, Lebanon, and Syria. Many Middle East observers who predicted Israel will fights with the Arab countries to be able to get water.

Water Security Management in the frame of regional institute is a good resolution for water conflict in the Middle East region. The establishment of a Middle East regional institutions focusing on the problem of a limited quantity of water resources are expected to create a way out of this problem. It is because Israel depends on the flow of water from

the rivers that are owned by Arab countries and the security of the Arab countries also implicitly relies on the military activities undertaken by Israel. This cooperation can use the principles of hydropolitics, one of which is to implement the Unlimited Regional Integrity theory. It means that the state is not entitled to change the quantity and quality of available water flowing into the territory of other countries. To minimize the crisis, should be made use of wastewater treatment systems in the Middle East. In addition, it is also advisable to halt production of foodstuffs due to agricultural needs water very much.

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