

**KRISZTINA LIGETVÁRI<sup>1</sup>****European and North-African governments face major challenges in preventing and treating the potential conflicts caused by lack of healthy drinking water****Az egészséges ivóvízhiányból fakadó potenciális konfliktusok megelőzése és kezelése komoly kihívás az európai és észak-afrikai kormányok számára****Abstract**

*The increasingly restricted access to healthy drinking water will generate local conflicts in the neighbouring areas of Europe, and the resulting systemic poverty of societies will create migrations significantly threatening European security.*

*Nowadays healthy drinking water has become one of the strategic natural resources. According to assumptions the size of „water business” equals to the half of oil business these days. The struggle for water could exceed the competition for oil. Accessibility to water will be a means of power.*

*Keywords: healthy drinking water security, migration, inter-state -, regional conflicts*

**Absztrakt**

*Az egészséges ivóvízhez való korlátozott hozzáférés növekedése lokális konfliktusokat vetít előre Európa szomszédos területein, valamint ehhez kapcsolódva a társadalmak elszegényedése jelentős migrációt fog előidézni, amely Európa biztonságát fenyegeti.*

*Napjainkban az egészséges ivóvíz a stratégiai természeti erőforrások sorába emelkedett. Becslések szerint a „víz-business” napjainkban az olajénak már körülbelül a felét teszi ki. A vízért zajló küzdelem a jövőben meghaladhatja az olajért folyó versenyt. A vízhez való hozzáférés hatalmi eszközzé válik.*

*Kulcsszavak: egészséges ivóvízhiány, migráció, államközi-, regionális konfliktusok*

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## HADTUDOMÁNYI SZEMLE

2016. IX. évfolyam 2. szám

I survey North Africa from geopolitical aspects, under the United Nations definition: Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Western Sahara. (UN, 2013).

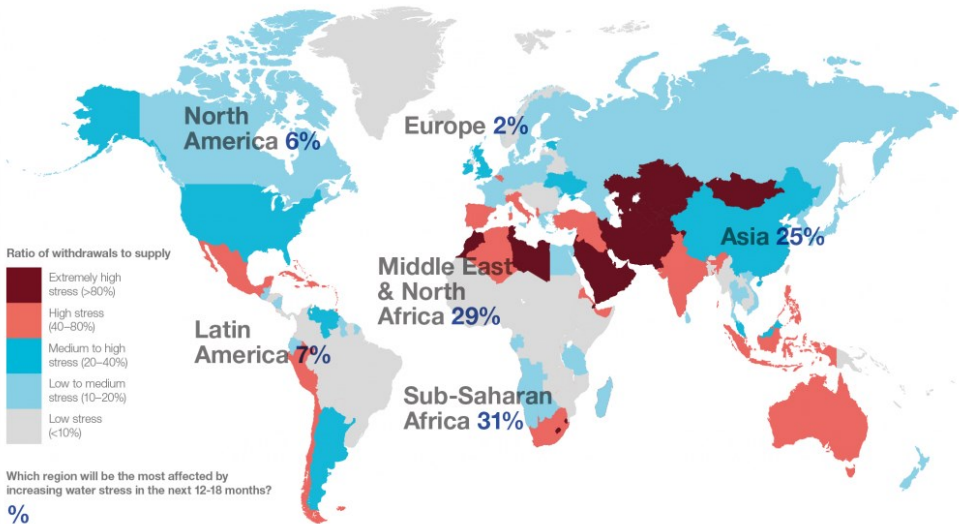
One of the most serious water scarcities is found in North Africa. In Libya, Tunisia and Algeria water per capita is less than 500 cubic meters. In Egypt and Morocco it is less than 1000 cubic meters. (Brown, 2008).

Availability below the threshold of 1000 cubic meters represents a state of "water scarcity", while anything below 500 cubic meters represents a state of "absolute scarcity". (FAO, 2012).

Annual renewable freshwater (m <sup>3</sup> /pers.yr)	Level of water stress
< 500	Absolute water scarcity
500 – 1000	Chronic water shortage
1 000 – 1 700	Regular water stress
> 1 700	Occasional or local water stress

*Table 1 - Conventional definitions of levels of water stress (after Falkenmark and Widstrand, 1992)  
(FAO, 2012)*

Furthermore, most South European countries, part of the Mediterranean, are suffering from different types of water problems: Italy, Malta, Croatia, Slovenia, Bosnia and Herzegovina, Montenegro, Albania, Greece and Cyprus.



Source: Survey on the Global Agenda 2014

Figure 1 - Water stress  
(Water Economic Forum, 2015.)

Facts and tendencies show that shortage of water, especially drinking water will be one of the key issues in Euro-Mediterranean relations, as it can be a main reason for various conflicts and security challenges. The European Union (EU) and relevant international organisations as well as governments both in European and North African countries should increase their efforts in order to tackle this issue adequately.

Based on the assumptions access to healthy drinking water sources will be one of the most important security issues in the future and will indirectly represent a challenge to the whole of Europe. The study demonstrates that the increasingly restricted access to healthy drinking water will generate local conflicts in the neighbouring areas of Europe, and that the resulting systemic poverty of societies will create migrations significantly threatening European security.

#### LACK OF DRINKING WATER IS ALSO LINKED WITH FURTHER CHALLENGES

This extends the basic problem to a complex problem set.

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— Overpopulation and urbanisation

One of the major reasons of the ingravescient water scarcity is the growing population all over the world.

Population of North Africa will increase by 50 % for 2050. In 2013 the total population in North Africa was around 210 million, which - based on estimations - will increase up to 315 million for 2050. (Population Reference Bureau, 2013).

The urban population in 2014 was 54% of the total global population, up from 34% in 1960, and it still continues to grow. Furthermore, the urban population growth is concentrated in the less developed regions of the world. Estimations foresee that by 2017, especially in less developed countries, a majority of people will be living in urban areas.

Trends show that the global urban population is expected to grow approximately 1.84% per year between 2015 and 2020, 1.63% per year between 2020 and 2025, and 1.44% per year between 2025 and 2030. (WHO, 2014).

Overpopulation linked with urbanization is bringing about growing needs for raw material.

— Water-food- and energy nexus problems

Water scarcity is generating danger, primarily due to the fact that agriculture and industry require more water in order to serve more and more people. (UNDP, 2006). Currently, agriculture accounts for 70 percent of global freshwater withdrawals. (FAO, 2012).

Population growth is expected to bring increased demand for energy, food and water, which will compromise the sustainable use of natural resources. This pressure on resources could finally result in shortages, which may put water, energy and food security for the people at risk, hamper economic development, and cause lasting irreparable environmental damage. (Biopolus, 2013)

The figure below illustrates the problem.



Figure 2 - The Urban Metabolic Challenge (Biopolus, 2013)

„The linear "Take - Make - Dispose" lifestyle of our cities increasingly depletes finite reserves while dumping wastes around the cities destroying the environment” (Biopolus, 2013).

All these aspects illustrate that nowadays healthy drinking water has become one of the strategic natural resources. Lack of water causes lack of food, which is associated with overpopulation and urbanisation; as well as declining GDP could result in systemic poverty of societies and could create migrations.

All North African countries suffer from these complex problems explained above. As overpopulation continues in the future, water scarcity will be growing in the region parallelly. Although with the financial aid of EU and UN, North African countries have started to develop their water-conduit and channel system and started to modify their water management system, these efforts are not enough. Negative world tendencies are accompanied also by internal affairs, difficulties and in some cases also by foreign policy problems, as in Egypt. (Glied, 2009a).

#### WATER - INTER-STATE CONFLICTS

Obtaining and securing water resources of shared, international water systems may result in conflicts.

It can cause disputes between peaceful countries. Enmity between countries can lead to armed conflict. Pollutions can affect the water supply of other countries. Nations with more favourable water strategy positions are able to reduce the amount of water transferred and also can affect its quality. (Szalkai, 2012).

Countries with stronger military potential can use their water policy dominance to threaten force and influence nations that are dependent on them.

Countries being at the lower flow of the rivers are particularly vulnerable, while countries at the upper flow of the rivers can overuse the available quantity of water. It may result in violent conflict, especially when downstream countries are militarily stronger than upstream countries. (Szalkai, 2012).

Hence the area of the Nile River is one of the potential crisis points. Nowadays Egypt shares the water supply of the Nile with 9 countries that takes 97 % of its water needs. Ethiopia and Sudan consume more and more water derogating the water-consumption rights of Egypt, which is a downstream country with militarily stronger conditions. In 1991 Egypt has already announced that it is ready to protect its rights for the water supply of the Nile even by military intervention. (Szalkay, 2004) (Havasi, 2011).

There is not even one African country that can serve 100 % of its population with healthy drinking water. (Glied, 2009b).

Not only can water scarcity be the only cause of the conflicts, but conflict can also cause water scarcity. Migrants fleeing armed conflict can cause heavier water needs also in countries where water scarcity was a problem before, but not as significant and deep as created by the migration influence. Furthermore, the occurring drinking water scarcity influences the economic development of these countries. (Havasi, 2011) (Szalkai 2012).

From 2011 the migrants, who earlier came from Middle East and Sub Sahara to Lybia, are seeking possibilities to further move to Europe. Because of the pressure caused by the huge amount of migrants and because of the reasons explained above, Egypt and Tunisia should often close their borders to refugees. In this case there is no other way to Europe, only the Mediterranean Sea.

#### MIGRATION – EFFECTS AND CONSEQUENCES FOR NORTH AFRICA AND EUROPE

The greatest security threat related to the shortage of fresh water arises from human security aspect. It seems likely to cause national and international security issues.

Tendencies show that access to healthy drinking water can cause local conflicts near Europe, at the south part of the Mediterranean. The conflicts can affect poverty, and physical treats, which are the main reasons for migrations to Europe.

These days the irregular migration to North Africa and from North Africa to Europe is a more significant source of conflicts and to-be-solved-problems than ever. Since the beginning of the year over 40 000 migrants have arrived in Italy. End of May 2015 more than 5000 migrants were rescued from the Mediterranean Sea (in the Central Mediterranean). In Africa and the Middle East a so called “special industry” has been set up on the transportation of illegal migrants to Europe. (Frontex, 2015).

MIGRATORY ROUTES MAP

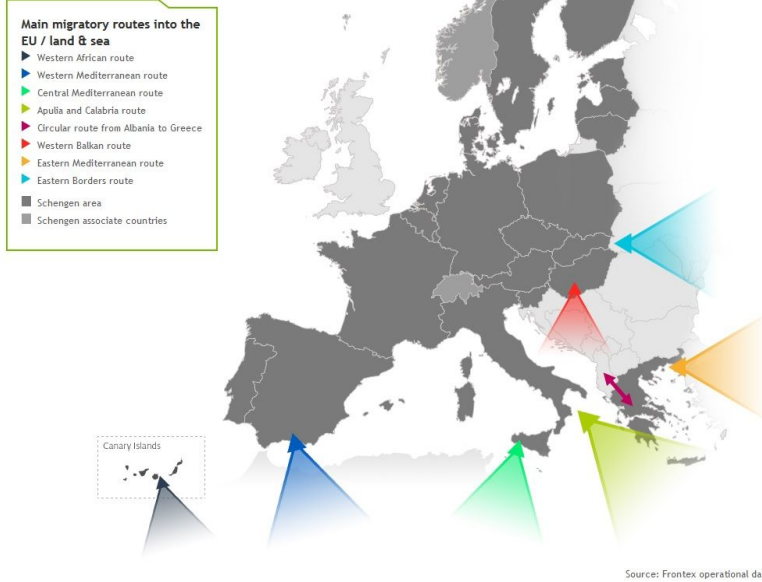


Figure 3 – Migratory Routes Map (Frontex, 2015)



Western Mediterranean route

This route is defined for Frontex operational purposes as the sea passage from North Africa to the Iberian Peninsula. West Africans, Sub-Saharan Africans try to reach the Western Mediterranean coast (Morocco and Algeria). Also Algerian and Moroccan nationals attempt to reach Spain, France and Italy. (Frontex, 2015).

Number of illegal border crossings in January – April 2015: 2808 (mostly from Syria, Guinea)

## HADTUDOMÁNYI SZEMLE

2016. IX. évfolyam 2. szám

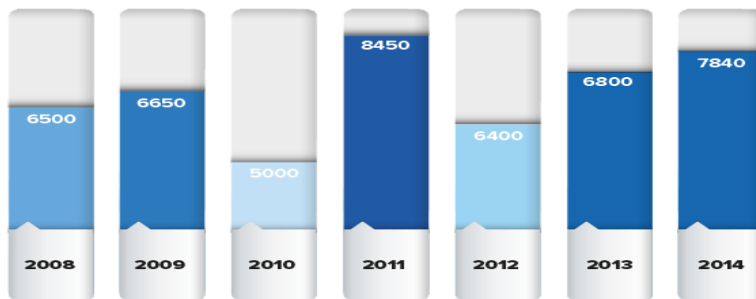


Figure 4 - Illegal border crossings on the Western Mediterranean route (sea and land) in numbers. (Frontex, 2015).



#### Central Mediterranean route

This route refers to the migratory flow from Northern Africa towards Italy and Malta. Libya often acts as a nexus point, where migrants from the Horn of Africa and Western African routes meet before embarking on their journey to the EU.

In 2008, nearly 40 000 migrants, mainly nationals of Tunisia, Nigeria, Somalia and Eritrea, were detected mostly near Lampedusa and Malta. In 2011, the eruption of civil unrest in Tunisia and Libya created a massive spike in the number of migrants to more than 64 000, along this route. From January to March, more than 20 000 Tunisians arrived on the Italian island of Lampedusa. They were mainly economic migrants, whose intention was to reach France to find job opportunities. In 2014, more than 170 000 migrants arrived solely in Italy, representing the largest influx into one country in the history of the European Union. Lots of migrants departed from Libya, where the lack of rule of law and basic law enforcement allow smuggling networks to thrive. Syrians and Eritreans were the top two nationalities, but numerous Africans coming from Sub-Saharan regions also use this route. (Frontex, 2015).

Number of illegal border crossings in January – April 2015: 26257 (mostly from Eritrea, Somalia, Nigeria)



## HADTUDOMÁNYI SZEMLE

2016. IX. évfolyam 2. szám

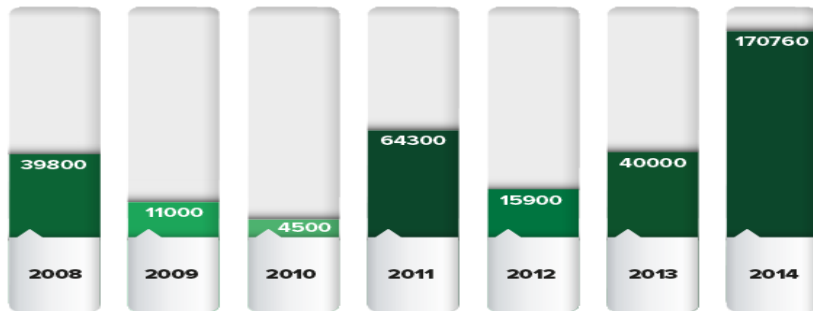


Figure 5 - Illegal border crossings on the Central Mediterranean route (including Apulia and Calabria) in numbers. (Frontex, 2015).

As a consequence we can see that the increasing number of regular and irregular migration causes serious security problems for the transit and receiver countries as well. Nowadays there is a significant migration flow from North Africa to Europe as well as from Black Africa to North Africa.

Reasons for that are political, and economical, many escape from civil war zones and part of them want to transit to Europe.

The international Arab migration also tends to target Europe, mainly because of economic and social reasons and with the purpose of family reunion. France is the first target country, here we can find the biggest community in Europe comparing to the whole population of France. It is also a fact that the Arab and other Muslim communities mean a special social problem in the EU countries. (N. Rózsa, 2012).

Even though water scarcity and conflicts are still mainly African and Middle Eastern problems, their consequences - legal and illegal, regular and irregular migration - , influence North Africa and Europe as well.

The problem is not at the border anymore, but is already in Europe.

The biggest risk from the challenges of the consequences of drinking water problems in Africa and Middle East for North Africa and Europe is the migration and the unmanageable refugee issue.

In consequence, the social integration of the migrants arrived in Europe is a very sensitive issue, as already millions of residents coming from Mediterranean countries (mainly from Morocco and Algeria) live in the EU.

Though, because of demographical reasons, EU needs migrants, who can be integrated to the societies and contribute to the economic development of the EU. Well-managed migration can contribute to boosting the economy and addressing labour market shortages. Thus on the one hand the EU needs to optimize the advantages of the migration, on the other needs to reduce the pressure of it. (EC, 2014).

## CONCLUSION

Solutions proposed by European and international organisations and affected governments for mitigating the risk of potential freshwater related conflicts and security threats are still not enough. Though problems described above are serious, the EU hasn't dealt with them at an appropriate and community level. Even Italy, Greece, Malta asked for assistance several times, as migration is a common EU problem, the leaders of the EU and the non-physically affected countries of the Community have not considered the problem as serious as it really is.

Hundreds of migrants had to die in the Mediterranean Sea in April 2015, in order for the EU to start really serious programs at last.

The European Commission finally sets out immediate and long-term responses to the migration challenges that Europe faces.

The budget of the EU operation Triton and Poseidon, coordinated by Frontex, will be tripled this year in order to help the migrants on the spot. EU has announced in May 2015 that it plans to accept 20,000 migrants in the coming two years and to re-settle them across the 25-nations-bloc in the wake of the Mediterranean migrant crisis.

The European Union has been debating a controversial quota system to handle the huge numbers of arrivals. The distribution would be bound by complex rules: national economic output, population, unemployment rates and the number of refugees already admitted to an individual country. (Frontex, 2015) (EC, 2015)

Furthermore, for disadvantaged groups the access to healthy drinking water and other necessary resources must be ensured in order not to have these lacks as sources of conflicts and radicalism. In long term to be prevented from the direct and indirect effects of lack of drinking water and other resources, the most efficient way would be if solutions were implemented locally.

All directly and indirectly affected countries as well as regional and international organisations have a role to take in this challenge. Increased security demands are needed cooperatively, rather than competitively to manage water scarcity and supply. (Coskun, 2007).

The growing legal and illegal migration because of lack of healthy drinking water to North Africa and through it to EU has spill-over effects - lack of food, unbearable living conditions, and these anticipate higher ethno-cultural conflicts in Europe.

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## HADTUDOMÁNYI SZEMLE

2016. IX. évfolyam 2. szám

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