

THE INTERNATIONAL JOURNAL OF
DRUG
POLICY

Special Focus on Middle East and North Africa
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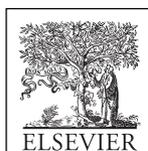
THE INTERNATIONAL JOURNAL OF

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Aims and Scope

The International Journal of Drug Policy provides a forum for the dissemination of current research, reviews, debate, and critical analysis on drug use and drug policy in a global context. It seeks to publish material on the social, political, legal, and health contexts of psychoactive substance use, both licit and illicit. The journal is particularly concerned to explore the effects of drug policy and practice on drug-using behaviour and its health and social consequences. It is the policy of the journal to represent a wide range of material on drug-related matters from around the world.

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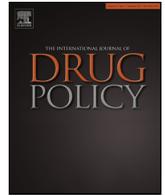
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Editorial

Drug policy and human rights in the Middle East and North Africa: Harm reduction, legal environment and public health



The Middle East and North Africa region is at the centre of many of the burning issues of our globalized and inter-dependent world. When it comes to drug use, infectious diseases and marginalized populations, however, the debate falls short. While the incidence and prevalence rates of drug injection and of related HIV infections remain low compared to other regions of the world, tough drug policies and discrimination against vulnerable populations remain embedded in the social, economic and cultural contexts of the region.

To address the lack of information in the region, the Global Commission on Drug Policy invited researchers from Morocco, Egypt, Lebanon and Iran to contribute to a collection entitled “Drug Policy in the Middle East and North Africa” which aimed at providing an overview of the legal, medical and societal aspects of drugs and drug policies in the region.

A first challenge was to define the region. The Commission on Narcotic Drugs splits the countries of the Middle East and North Africa into two of the United Nations regional groups, the African group and the Asia-Pacific group, whereas the World Health Organization (WHO) defines a Middle East and North Africa regional group for the East Mediterranean also covering Afghanistan and Pakistan, but excluding Algeria. The UN Arab group, representing the membership of the League of Arab States (LAS) recognizes a similar MENA region with the exclusion of Iran. The articles in this issue of the International Journal of Drug Policy consider all countries from Morocco to Afghanistan that are part of the UN, WHO and League of Arab States (LAS) regional groupings. Added to this is the challenge of analysing drug policies in a region where many countries share language and religion, but where the cultural, ethnic, social and economic differences are considerable.

For historical, religious and political reasons, the Middle East and North Africa (MENA) started to be considered as a regional group through the introduction of pan-Arabism and its development with the creation of the LAS in 1945. MENA grew further when other countries, stretching to South East Asia, Central Asia and West Africa joined in to create the “Islamic world”. Such a regional bloc is however heterogeneous outside of shared religion and its sub-regions are more likely to have shared structural drug policy reforms. For example, the Maghreb (Mauritania, Morocco, Algeria, Tunisia and Libya) share the same socio-structural barriers to drug policy reform, and similar drug use patterns in their populations, while they face similar security threats related to drug trafficking. This sub-region, of which countries are intrinsically different from other MENA countries, be it with regard to the

religious practices, country incomes or ethnic groups, suggest that a MENA approach to drug policy is not possible in the current regional framework. More data and research on the similarities of and differences between MENA countries is needed.

One shared characteristic of all countries in the region is Islam as a State religion. Islam states that illicit drugs are prohibited (*haram*). However its principal sources for contemporary policy, the *Qu’ran* or the *Sunnah* (the Prophet’s sayings), allow for the implementation of harm reduction programs and services to preserve human dignity and protect physical and mental health (see for example the arguments by [Kamarulzaman & Saifuddeen, 2010](#)). Iran, Morocco and Lebanon have followed this interpretation of the sacred books vis-à-vis drug use and the rehabilitation of drug users, whereas others such as the Gulf countries and Pakistan focus on drug prohibition and apply a punitive approach derived from the moral purposes of the *Sharia* law.

This special issue reports that drug control policies were regionalized early on, in the pre-UN Convention era. Egypt, for instance, passed the first cannabis prohibition law in the world in 1879 ([UNODC, 2008](#)). The country also led the movement to add the international trade in cannabis to the list of controlled activities under the Geneva Opium Convention in 1925 ([UNODC, 2008](#)). In 1929, Egypt established the world’s first drug control agency, the Central Narcotics Information Bureau, which then became the Anti-Narcotic General Administration in the 1970s ([UNODC, 2005](#)), helped establish the Permanent Anti-Narcotics Bureau of the Arab States League in 1950 ([UNODC, 1980](#)). Moreover, Egypt recommended the creation of a United Nations Anti-Narcotics Bureau for the Middle-East, headquartered in Cairo, to focus on crop eradication and smuggling. The Commission on Narcotic Drugs rejected this program because some States in the region were reluctant to embrace the idea, and others were unwilling to create an international mechanism to deal with a regional situation ([UNODC, 1960](#)).

Although data are relatively limited, the overall estimate is that 630 000 people inject drugs in the region ([Aaraj & Abou Chrouh, 2016](#)). There is evidence that drug use and its adverse health and social consequences are increasing and that drug control policies are not achieving their objectives. Nevertheless, some governments and other stakeholders are implementing harm reduction as a counter-balance to the national supply-oriented drug policies ([Greenfiled & Paoli, 2012](#)) in the region. Several articles in this issue cover different aspects of harm reduction, its health and social benefits as well as the barriers its implementation faces. In their

commentary, Himmich and Madani (2016) document the effectiveness of harm reduction, focusing on the Iranian and Moroccan models. The commentary highlights the adverse health effects of drug use and the response given by the two governments to reduce the harms related to the increase in HIV and hepatitis C among people who inject drugs. The positive effects of the Iranian and the Moroccan approaches to harm reduction should be viewed as a first response to the legal, political and social barriers to drug policy reform in MENA. This is mainly related to the fact that most countries in the region have not yet developed a risk environment approach to address the harms related to drug use and to the legal environment in which these responses are shaped (Rhodes, 2002): they continue to rely on measures to eliminate drug use.

Similarly, the policy analysis by El-Khoury, Abbas, Nakhle, and Matar (2016) discusses the Lebanese experience in implementing an Opioid Substitution Therapy (OST) programme in 2011, as the first Arab country to use buprenorphine. Morocco implemented OST using oral methadone in 2010. The OST programme faced several challenges, starting with the lack of training of health workers and service providers, the absence of local prescribing guidelines, the non-existence of OST in prisons and the inadequacy of the services to the needs of women who use drugs. Nevertheless, hepatitis C infection rates among people who inject drugs are decreasing since the implementation of OST, and the programme had a significant impact on clinical practice in a short period. Noting the benefits of the programme, the authors call for the Lebanese example to be rolled-out in the rest of the region (El-Khoury et al., 2016). These findings are similar to the results of the introduction and scale-up of buprenorphine substitution therapy in other regions of the world, with comparable conservative social and political environments, as well as financial constraints (Bruce, Dvoryak, Sylla, & Altice, 2007). In their commentary, Aaraj and Abou Chrouh (2016) show how instrumental the role of civil society organizations and advocates has been in the management of the consequences of drug use and of drug policies. Because the HIV epidemic in the region is concentrated among key populations including people who use drugs, civil society partners are essential in addition to the public sector to help structure the national response to the HIV and hepatitis epidemics. Nevertheless, civil society organizations suffer from insufficient funding and deliver services in difficult legal and cultural environments with little or no political support. The political and financial barriers that civil society faces in its advocacy efforts to change national drug policies have been documented elsewhere (Spicer et al., 2011).

To have a better overview of the legal environment in which drug policy reform and harm reduction can be introduced, the commentary by Tinasti and El-Shazly (2016) discusses how the legal environment has led to the prioritization of repressive approaches, including arrests, conviction and mandatory treatment of people who use drugs in the region. Reviewing 16 national policies, the authors delineate the different provisions of drug control laws on possession, consumption, dependence treatment and the rights of convicted users to confidentiality. National legal frameworks in MENA share the specificity of treating people who use drugs as either “sick people” or criminals.

The Middle East and North Africa is not only a transit region for illicit drugs, but also a producing region for many of them. The commentary by Afsahi and Darwich (2016) focuses on cannabis production and distribution in two of the largest drug cultivation and production localities in the region, the Rif Mountains in Morocco and the Beqaa Valley in Lebanon. These two places are secluded and underdeveloped, and the production and export of cannabis and cannabis resin represents significant economic

income for the local populations. The two localities developed expertise in the production and sale of cannabis, but the market that is now facing competition from domestic production in the traditionally importing/consuming countries particularly in Europe (Decorte & Potter, 2015). The Rif and Beqaa are also confronted with the political and security turmoil that occurs in many countries, and competition with new producers in the region.

Finally, papers in this collection report on the structural barriers to drug policy reform in the region. Some of these barriers of a legal, cultural, social or religious nature can be overcome, as many of the articles report and which are demonstrated by the developments in Morocco, Lebanon and Iran. Nevertheless, countries in the region lack a comprehensive and multidisciplinary approach to drug policy reform. The health sector reforms and the introduction of harm reduction measures do not guarantee people who use drugs protection from a repressive legal environment, and are far from sufficient in the global policy framework. As the Global Commission on Drug Policy reported in 2015, drug policies need to operate within the sustainable development agenda (Tinasti, Bém, Grover, Kazatchkine, & Dreifuss, 2015), and MENA countries – in order to align with the sustainable development elements of justice, dignity and people-centred policies – will need to review their drug policies.

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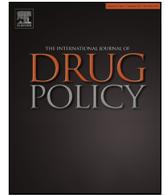
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Commentary

Drug policy and harm reduction in the Middle East and North Africa: The role of civil society



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ABSTRACT

Civil society organizations (CSOs) in Middle East and North Africa (MENA) are the principal partners of government in scaling up the response to HIV and in implementing national policies. In return, CSOs expect endorsement of their work by the governments. Some CSOs face weaknesses and need capacity-building in order for them to reach the level of response required for reducing drug-related harm in this region. Substance use and the transmission of HIV are increasing in the MENA region. The limited data available on drug use show that there are approximately 630,000 people who inject drugs (PWID) across the region. The HIV epidemic remains concentrated among PWID and other key populations in the region. Comprehensive harm reduction programs which include prevention, care, and HIV treatment for PWID are being implemented by CSOs. This could not happen without the presence of a conducive environment which has been facilitated by the CSOs, and which aims to lead to a positive response in health policies, and thus to harm reduction programs in some countries in the region. However, based on the international data, antiretroviral therapy (ART) coverage remains low in these countries, even if the number of people living with HIV (PLHIV) receiving ART is increasing. This increase can sometimes mask important challenges in equity: in several countries PWID are the most likely to be infected with HIV while being the least likely to be receiving care and ART. Therefore, concentrated efforts need to continue toward the goal of having mainstream harm reduction approaches in region.

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According to the Global report on HIV (WHO, 2006), civil society initiatives were the foundations on which the national response has been built in most countries. Civil society remains at the forefront of prevention, care and support programs, particularly among the most vulnerable and hard-to-reach populations. Over the years, civil society has also helped to influence scientific research and has played a key role in challenging restrictive drug patents and bringing down the cost of HIV treatment. “Civil society” is essentially made up of citizens who organize themselves outside of government to address specific needs and concerns that current governmental process cannot address by itself, with the belief that societies function more effectively when the State and its citizens engage openly on how policies are formulated and implemented.

In the context of HIV/AIDS, many different individuals and organizations participate actively in the epidemic response outside of government structures. The most active members of civil society are often those with personal experience of the epidemic, either as

people living with HIV or members of marginalized and vulnerable populations, such as people who inject drugs (PWID). They are present at every level of the response, in associations and networks of people living with HIV (PLHIV), community organizations or as members of other HIV/AIDS-related organizations.

Civil society groups have engaged in advocacy to influence a range of policy objectives since the beginning of the AIDS epidemic, including better access to health care and less expensive drugs. For example, in 1987 the members of the AIDS Coalition to Unleash Power in New York drew attention to their claim that excessive profits earned by pharmaceutical companies on AIDS medications limited access to treatment and slowed the process of drug approval, thus placing lives unnecessarily at risk. The Coalition also campaigned for public education on the epidemic and an end to AIDS-related discrimination. This early activism helped create the foundation for more affordable treatment initiatives (WHO, 2006).

In the past 10 years, similar examples of civil society organizations (CSOs) in the Middle East and North Africa (MENA) have demonstrated their success in scaling up HIV preventive national policies in a number of countries. This work was based mainly on advocacy, as well as on partnering with governments, despite the lack of technical and financial support.

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CSOs and policy development in the Middle East and North Africa

Civil society organizations (CSOs) in the Middle East and North Africa (MENA) have played an active role in advocating for harm reduction approaches and people who use drugs' (PWUD) rights, and to include them in health and development policies. The Middle East and North Africa Association (MENAHA) is the umbrella organization for harm reduction CSOs in the region. In addition to advocating with policymakers and government officials, advocating with religious leaders to promote acceptance of harm reduction programs is often central to increasing tolerance of harm reduction in the region. MENAHA and a group of religious leaders issued a guide on harm reduction and religion aiming to fight stigma against PWUD and to ensure their social reintegration (MENAHA, 2015a).

In November 2013, MENAHA held its 2nd Regional Conference on Harm Reduction in Beirut. Hosted by the Lebanese Ministry of Public Health, the event brought delegates from 24 countries to discuss, debate and advocate for harm reduction policies and practices. A pre-conference donors' meeting highlighted MENA's harm reduction needs, ensuring that the region remains an integral part of donors' agendas (HRI, 2015). MENA also has a community-led organization, Middle East and North Africa Network of People who Use Drugs (MENANPUD), which was formed at the Harm Reduction International Conference in Beirut in 2011 and its main mission is to advocate for the rights of PWUD.

The Global State on Harm reduction (HRI, 2015) showed that although monitoring of injecting drug use has improved slightly in the region, many MENA countries still make no explicit mention of harm reduction in their national strategies. Algeria's national strategic plan does not refer to harm reduction, which is also absent from Bahrain's national strategy. In Oman and Kuwait, there is no mention of harm reduction, but there are plans to revise these documents to include key populations including PWID. In Jordan and Saudi Arabia, the need to strengthen HIV prevention for key populations is acknowledged but PWID are not. However, Egypt, Iran, Morocco, Syria and Tunisia all refer to harm reduction in their national strategic plans (HRI, 2015).

Currently, harm reduction policies and programs exist in Afghanistan, Iran, Lebanon, Morocco, Pakistan, and Syria due to a number of advocacy actions that defended the efficiency of these policies and programs: these actions were mainly conducted by civil society organizations in most of these countries (MENAHA, 2013a).

In November 2012, a technical meeting to develop an Arab AIDS strategy took place in Riyadh. The meeting was organized by the League of Arab States in coordination with the United Nations Joint Program on HIV/AIDS (UNAIDS). It served as a technical forum for facilitating the development and implementation of the strategy. The Council of Arab Ministers of Health endorsed the Arab AIDS Strategy (2014–2020) during its session at the League of Arab States. The strategy urges the need to scale up HIV testing and harm reduction programs as part of an integrated package of services for PWID.

In the same scope of harm reduction strategies, as stated by many resources and in the Global State of Harm Reduction report (HRI, 2015), civil society played a leading role in securing important reductions in the cost of hepatitis C (HCV) medications. According to the Economics Times civil society actions contributed to adding ten new countries by Gilead for its Sovaldi access program, Tunisia and Libya were among these 10 countries (Economic Times, 2015).

All the advocacy for policy development by CSOs were mainly based on direct contacts with policy makers, in addition to scoping missions, sensitization sessions, working with the media, and

organizing communication campaigns, including partnering with key stakeholders such as religious leaders and policy makers.

Current situation and barriers

Several developments have happened in the MENA region since the first situation assessment on harm reduction conducted by MENAHA in 2008. Morocco and Lebanon adopted a harm reduction policy on Opioid Substitution Therapy (OST); Bahrain, Egypt, Jordan and Syria included PWID as a target group for HIV prevention in their National Aids Strategic Plan (NASP); OST was started in Afghanistan, Lebanon and Morocco and scaled up in Iran; Needle and Syringe Programs (NSP) were scaled up in ten countries – Afghanistan, Egypt, Iran, Jordan, Lebanon, Morocco, Oman, Pakistan, Palestine and Tunisia (MENAHA, 2012). However, these changes were reached very slowly due to a number of security crises, political, social and financial barriers in MENA, which resulted in a need to reach additional stakeholders and conduct further advocacy efforts.

MENA – the political and security crisis

MENA countries have experienced an influx of refugees due to on-going conflicts in countries in the region, including Afghanistan, Iraq, Libya, Syria, and Yemen. The conflict in Syria, in particular, has placed a burden on neighboring countries including Lebanon and Jordan, as well as Egypt to a lesser extent (UNHCR, 2015).

Heroin is the most commonly reported injectable drug by countries in the region (MENAHA, 2012). Substance use, including injecting drug use among refugee and migrant populations, is a neglected area of public health although it has been recognized as an important risk environment for substance-related harms, including HIV (Strathdee et al., 2010). Limited research has been conducted on harm reduction approaches in refugee and migrant settings worldwide. Unpublished data from 2014–2015 highlights the emergent need to consider harm reduction and HIV prevention among refugees in primary health care provisions.

While HIV infection is spreading in MENA, with the highest number of new cases reported each year worldwide, the consequences of the wars have decreased governments' commitments to the HIV response.

Access to continuum of care, treatment and services

In June 2012, the World Health Organization (WHO) released the first consolidated guidelines for the use of antiretroviral (ARV) drugs to prevent and treat HIV infection, which brought together clinical, operational, and programmatic guidance for all populations across the continuum of HIV services. As such, WHO recommends the use of ARV drugs, particularly for people exposed to HIV risk, including those with higher-risk behaviors.

A recent population size estimation study, conducted by MENAHA with men who have sex with men (MSM) and PWID in Lebanon, found a high prevalence of hepatitis C among PWID which was associated with sharing needles (MENAHA, 2015b). The results of this study as well as other research and data have informed that new harm reduction policies and programs are needed, and are currently piloted in Lebanon by the Ministry of Public Health in partnership with MENAHA.

HIV testing and counseling (HTC) is an integral component of HIV prevention programs and, CSOs have been advocating for this service since its start-up. However, there is still very limited access to HTC throughout the region. Some progress has been made through the integration of HTC with other health services, which contributed to increased access to this service. Moreover, based on Global Fund reports the numbers of voluntary HTC centers have

increased in the past seven years across the region because many governments of MENA countries have taken major steps towards the prevention of HIV including this service. However, the fact that injecting drug use remains the primary route of HIV transmission emphasizes the need for further scale up and legalization of these types of prevention initiatives.

Gender specific services and women injecting drugs

In 2010, women comprised an estimated 44–45% of people living with HIV in the MENA. The vast majority of women in the region, who are HIV-positive, acquired their infection from their husbands or partners who practice high-risk behavior.

Injecting drug use among women is growing worldwide (European Monitoring Centre for Drugs and Drug Addiction, 2006). Although the actual proportion of women who inject drugs in the MENA region is unknown, anecdotal data implies similar growing trends in injecting drug use among women as elsewhere in the world (WHO, 2014).

Although the evidence is that female injecting drug users have different experiences from their male counterparts and limited access to harm reduction services, gender sensitive interventions are rarely integrated into harm reduction programs. An operational research study was conducted in 2013 by MENAHRA in five countries (Afghanistan, Egypt, Lebanon, Morocco and Tunisia) to better understand the context of drug use among women who inject drugs and the factors that hinder or facilitate access to harm reduction services. The study found a number of problems related to gender-based norms and domestic abuse which lead to drug use. For example, women from Egypt, Lebanon, Morocco, and Tunisia identified factors that contributed to their initiation into drug use, including a history of family problems, sexual relations outside marriage, being left by their partners, unwanted pregnancies, and abortions. In addition, domestic abuse, including verbal and physical abuse as well as other unjust treatment from family members, was believed to make women vulnerable to drug use. The study findings also highlighted the underlying gender-specific determinants of needle sharing. Women tended to use the syringe after their partner and were therefore more likely than their partners to use contaminated needles. The findings were concordant with available data from the region and elsewhere (MENAHRA, 2013b; Rafiey, 2009).

Women in MENA face important health hazards associated with gender, and have difficulties accessing healthcare services. Sexually transmitted infections, HIV, and hepatitis B and C infections were found to be common among female injectors, particularly those who engage in commercial sex. Unsafe sexual practices among women who inject drugs are shaped by gender determinants and infections.

Interventions to reduce harm associated with drug use should therefore take into consideration the social determinants that expose women to injecting drug-related hazards. Efforts should be focused on improving women's education, ensuring their economic independence, and increasing their awareness of their rights. Harm-reduction approaches should prioritize women in all their activities. More financial and human resources within existing programs should be dedicated to reaching out to women who inject drugs and responding to their health and social needs.

Repressive laws and social stigma

The criminalization of sex work, drug use, and same-sex relations in MENA countries mean that many people from key populations are incarcerated at some point in their lives. Discriminatory legislation, stigma, and violence in many countries pose major barriers to providing HIV services and limit the use of

the existing ones, unless a paradigm shift would transform these legislation to public health policies, similarly to the situation that Malaysia underwent in 2015, where the government adopted needle exchange, opiate substitution and other harm-reduction measures.

Globally, according to WHO, there are 83 countries that have repressive laws that pose barriers to HIV responses. Furthermore 33 countries and territories still include the death penalty for drug offences, including 10 in which the sentence is mandatory. 16 among the 33 concerned countries are located in MENA; varying from high applications states (Iran, Saudi Arabia) to low applications states (Kuwait, Pakistan, Egypt), or symbolic applications states (Oman, Qatar, United Arab Emirates, Bahrain, Palestinian Territories, South Sudan). Some countries have insufficient data on any further details (Libya, Sudan, Iraq, Syria, Yemen). In the past year, hundreds of people have been executed for drug offences in violation of international law in a small minority of states that continue to operate at the fringes of international consensus (Gallahue & Lines, 2015).

Strengthening the role of CSOs to scale up HIV and HR responses

Based on the above, CSOs have demonstrated a strong influencing role in harm reduction policy development; however there is a need for CSOs to be strengthened in order to partner with stakeholders and advocate with policy makers in their countries. For a long time, the role of the key population communities and PLHIV was underestimated and they were considered beneficiaries and not key partners of the HIV response. MENAHRA, for instance, established close partnerships with PWID and their networks since its inception. Additionally, key populations and CSOs are not usually engaged as part of monitoring the quality of services provided, including documenting rights violation cases. One of the factors contributing to this situation is the limited capacity of these communities and their representative organizations. The strengthening needs would include capacity to organize engagement as well as technical capacities such as management and service related-knowledge and skills.

Most notably, in 2014, the endorsement of the League of Arab States' (LAS) HIV strategy by the Ministers of Public Health gave hope that after 33 years of the HIV epidemic, MENA CSOs now have a strategy to fight HIV. However, CSOs must continue to push national governments and UN agencies to implement this strategy, translate it into law and cement its funding within country's budgets.

The Regional/Arab Network against AIDS (RANAA) is another leading CSO organization which is active in the region. It covers 25 countries in MENA and is a network of national networks of CSOs working on HIV as well as support groups of people living with HIV (PLHIV) in the MENA. In 2014, RANAA signed a Memorandum of Understanding with the League of Arab States to implement the HIV strategy throughout the MENA region.

Research and evidence from MENA are very rare and there is a need to provide support to research institutions and to work with these institutions to compile regional data in order to better understand the epidemic.

As key players, CSOs suffer from a serious lack of resources. The Global Fund's new eligibility criteria give the impression that the Fund is withdrawing from the MENA region. Currently, the Global Fund is the largest funder of HIV services in the world and only six to seven countries of the MENA region are eligible to receive its funding. The reason for this is that MENA countries are being classified as middle to high-income countries. Yet a high-income level does not necessarily mean an adequate government response to HIV. In most countries, HIV is not even recognized as an issue. As such, CSOs and sometimes governments are seeking support from

international organizations. The MENA CSOs that assist in filling the gap between the services provided by the government and the needs of people necessitate financial support to sustain and implement their programs.

Conclusion

In MENA, there are several CSOs that are making a real change in policies, and having an impact on service delivery and community progress. Regional networks are being created, including RANAA, MENAHRA, MENAROSA, ITPC and two newly established networks, MENANPUD and M. Coalition, to address HIV among key populations. MENANPUD, M. Coalition and MENAROSA are considered to be a real revolution in CSOs in this part of the world. They are networks of community members who want to defend their rights. MENAROSA is working with women living with HIV. M. Coalition is a beacon of hope for MSM rights and support. MENANPUD is the network of PWUD who advocate for their rights, promote their right to health and harm reduction in spite of all the challenges, mainly related to criminalization and repressive laws.

The visibility of PWUD in the region is crucial for change. They must be involved in decisions or policy making that will address their health rights and access to services. While many CSOs are working on advocacy for access to Anti-Retroviral Treatment, these efforts need to be coordinated, and strategized with existing networks and CSOs. A regional platform is being initiated for this purpose and if CSOs can work together, they can make their voice heard loud and clear and thus together will succeed strongly in advocating for integrated policies.

Despite benefiting from many grants, CSOs in MENA need urgent support to sustain their efforts, to advocate for harm reduction policies and to improve their services. The MENA region is treading a line between low drug use and HIV prevalence and an overwhelming wave of new cases, and all the indicators point to the same inevitable outcome. Government, funders, academia, all other stakeholders, and UN agencies working together will help

curb drug use prevalence and the harms associated with the current regional situation.

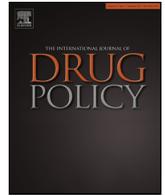
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Commentary

Incarceration or mandatory treatment: Drug use and the law in the Middle East and North Africa



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ABSTRACT

In the Middle East and North Africa (MENA), drug policies are embedded in the prohibition paradigm. Laws and legislation criminalize all types of activities related to illicit drugs. This article gives a detailed assessment of the provisions of Arab national laws to control the use of illicit drugs across the areas of punishment of drug users, penalties for drug dependence, legislation on use and dependence treatment, and the right of the convicted people who use drugs to confidentiality. It reviews the national legislations on drug control of 16 Arab countries as amended in January 2011.

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Introduction

Since the passage of the Single Convention on Narcotic Drugs in 1961, complemented by the Convention on Psychotropic Substances in 1971, the international community has remained committed to eliminating the non-medical use of illicit drugs. The 22 Arab countries members of the League of Arab States (LAS),¹ all parties to the conventions mentioned above, committed to eliminating drugs and to include the international drug control measures in their national legislations.

Representing the largest part of the Middle East and North Africa (MENA),² Arab countries members of the LAS have taken regional legislative commitments to eliminating drug use by establishing the Permanent Anti-Narcotics Bureau of the LAS in 1950 (United Nations Office on Drugs and Crime, 1980), and by ratifying the Arab Convention against illicit trafficking in narcotic drugs and psychotropic substances (League of Arab States, 1994).

These countries also schedule substances in their national laws following the “Unified Table” or the Unified Arab Table for Narcotic Drugs and Psychotropic Substances, derived from United Nations conventions.

These international and regional agreements constantly emphasized the need to embed their provisions in national laws, in order to eliminate the use of illicit drugs. MENA has a long history of drug use (Baasher, 1981) and has played a major role in introducing prohibition both nationally and internationally. As far back as 1879, Egypt introduced the first legislation prohibiting the use of cannabis (United Nations Office on Drugs and Crime, 2008). MENA is a production region for many substances, including cannabis, grown in Morocco (Afsahi, 2015) and Lebanon; small quantities of opiates produced in the Sinai; amphetamine-type stimulants (ATS) produced in countries from Egypt to Lebanon and khat cultivated from Yemen to Somalia (United Nations Office on Drugs and Crime, 2013). But mostly, MENA is an area of consumption and transit. The region is at the geographic heart of trafficking routes: opiates transiting from the Golden Crescent to Europe, cannabis travelling from Morocco to the Gulf countries, cocaine from Latin America to Europe, methamphetamines from West Africa to Europe, and ATS from Eastern Europe to South Asia. In North Africa, the two most commonly used narcotics are cannabis and ATS, with rates of prevalence of use of 4.3% (2.2–6.6%) and 0.6% (0.2–0.9%) respectively (United Nations Office on Drugs and Crime, 2014b). The prevalence of drug injection in the Near and Middle East, of 0.08% (0.03–0.13), and the prevalence of HIV among people who inject drugs are both lower than the prevalence rates in the rest of the world (United Nations Office on Drugs and

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¹ The 22 member states of the League of Arab States are: Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Tunisia, United Arab Emirates (UAE) and Yemen.

² Since the definition of MENA and its countries changes within international organizations groupings, this article analyses the national legislations of the Member States of UNODC’s Regional Office in MENA (ROMENA): Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, South Sudan, Syria, Tunisia, UAE and Yemen (Map 1).

Crime, 2015). Nevertheless, the use and seizures of ATS have doubled in few years according to available data (United Nations Office on Drugs and Crime, 2011).

This article provides a detailed assessment of the provisions of Arab national laws to control the use of illicit drugs across the areas of punishment of drug users, penalties for drug dependence, legislation on use and dependence treatment (even if they are undifferentiated in the law), and the right of the convicted people who use drugs to confidentiality. In MENA the conviction and punishment of drug users is the main tool used to combat illicit drug use. The article reviews the methodology used to collect and analyse the data of drug control laws in 16 MENA countries as of January 2011 (Table 1). We then describe the legislative provisions related to drug use and dependence, be it imprisonment or compulsory treatment convictions. The article focuses on drug use, dependence, possession and the rights and obligations of people who use drugs; and does not address legal provisions regarding drug trafficking or transnational organized crime. It aims at providing policymakers, researchers and civil society representatives with the tools to understand and fill the gaps in the legal provisions related to drug use in the MENA region. After the Arab Springs starting 2011, the legislations reviewed have not been amended; the Tunisian government submitted an amendment of its narcotics law to Parliament in July 2015 (Government of Tunisia, 2015).

Methodology

A systematic review of the national legislations on drug control of 16 Arab countries as amended in January 2011 has been undertaken between June and August 2015: Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Tunisia, UAE, and Yemen. We refer to these countries, covered by the United Nations Office on Drugs and Crime MENA regional Office (ROMENA), as the MENA region. Peer-reviewed and grey literature as well as policy documents and news reports were used to gather information describing opiates, cocaine, cannabis and ATS use prevalence, drug-related arrested population and sociopolitical and legal context for people who use drugs in Arab countries. One of the authors had the copies of the

16 national legislations and the regional convention in Arabic. The authors read the national laws on drug control and classified their provisions into single categories on how drug possession and use are punished, how drug treatment is ordered, and how confidentiality is included in drug-related cases.

Limitations

While every effort was made to identify all valid sources of information on the legal and political context for people who use drugs in Arab countries, data availability varied widely by country. Little data was available on the number of incarcerated convicts for drug offenses, with some available data on drug trafficking offenses but virtually none on drug use offenses and mostly a combination of both in the available data as the offenses are treated similarly. No data existed for the application of compulsory treatment in the 16 countries. Three ROMENA countries' national laws could not be accessed: South Sudan, Syria and the Palestinian territories.

Punitive legislation against drug use in MENA

Possession of illicit drugs for personal use in all the Arab countries is punishable by a prison term, often along with a monetary fine. Preemptive precautionary convictions to punish activities which are considered to encourage drug consumption are also common.

In some Arab countries the law focuses less on consumption per se and more on possession for the purpose of consumption. For example, in Egypt, the punishment for anyone who possesses, procures or purchases a drug or cultivates plants from which such substances can be extracted, "for personal consumption or use in cases unauthorized by law" (Arab Republic of Egypt, 1989) includes imprisonment of between three to 15 years and a fine of between ten and fifty thousand Egyptian Pounds (1300–6400 USD). This law does not include punishing people who use drugs if they are in possession of any quantity of drugs. However, the Egyptian penal code views the consumption of alcohol or drugs as an important aggravating factor when punishing manslaughter or unintended injury if the act occurred under the influence of such substances (Arab Republic of Egypt, 1937).

Table 1
Introduction of drug control laws in the Arab countries.

Year of adoption	Law name	Year of amendment	Country
2004	Law No. 04-18 of 25 December 2004 on Prevention and Repression of Illicit Use and Trafficking of Narcotics and Psychotropic Substances	–	Algeria
1973	Decretal Law No. 4 of 1973 on Controlling the Use and Circulation of Narcotic Substances and Preparations	–	Bahrain
1960	Act No. 122 of 1989 amending law No. 182 of 1960, control of trade of narcotics and regulation of substances	1989	Egypt
1965	Narcotics Act No. 68 of 1965 amended by the Narcotics Control Act No. 38 of 2002	2002	Iraq
1988	Law No. 11 of 1988, Law on Narcotic Drugs and Psychotropic Substances	–	Jordan
1983	Law No. 12 of 2007 amending Law No. 74 of 1983 on drug control and regulation of the use and trafficking	2007	Kuwait
1998	Law No. 673 of 1998 on Narcotics, Psychotropic Substances and Precursors as Amended by Law No. 77 of 1999	1999	Lebanon
1990	Law No. 7 of 1990 on Drugs and Psychotropic Substances	–	Libya
1974	Dahir No. 1-73-282 of 21 May 1974 on the suppression of drug use and drug prevention.	–	Morocco
2000	Law No. 28 of 2000 on the Control of Narcotic Drugs and Psychotropic Substances	–	Oman
1987	Law No. 9 of 1987 on Control and Regulation of Control and Regulation of Narcotic Drugs and Dangerous Psychotropic Substances	2006	Qatar
2005	Law No. 152 of 1426, Anti Narcotic Drugs and Psychotropic Substances	–	Saudi Arabia
1994	Narcotic Drugs and Psychotropic Substances Act 1994	–	Sudan
1992	Law No. 92-52 of 18 May 1992 on Narcotic drugs	–	Tunisia
1995	Federal Law No. 14 of 1995, Anti-Narcotic Drugs and Psychotropic Substances	–	UAE
1992	Unlawful Narcotics and Psychotropic Substances Trafficking and Use Act No. 2 of 1992	–	Yemen



Map 1. UNODC's Middle East and North Africa Member States.

Source: United Nations Office on Drugs and Crime, Regional Office for the Middle East and North Africa.

Kuwaiti law is similar in that it punishes the possession, procurement or purchase for personal consumption with imprisonment of no more than 10 years and with a fine that does not exceed ten thousand Kuwaiti Dinars (33,000 USD) (Article 33) (State of Kuwait, 2007) However the law does not have a sanction for anyone using drugs but not in possession of the substance. The Kuwaiti legislator also authorizes the court, after a period of three months, to halt execution of sanction and extradite any convicted foreigner from Kuwait if proven that he or she is no longer dependent on drugs. In Saudi Arabia, the regulation also focuses on drug possession for the purpose of personal consumption in unauthorized cases (Kingdom of Saudi Arabia, 2005) and is punishable by imprisonment of at least six months and no more than two years.

Again, in Iraq, the law does not sanction consumption but is more severe than many other Arab countries in punishing possession, stipulating imprisonment of up to fifteen years or three years and a fine (Republic of Iraq, 2002). However, if drug dependence was caused by a medical condition, the court might order the user to be admitted to a center for treatment as an alternative to custody.

In Yemen, imprisonment of five years is the punishment for anyone who possesses, procures or purchases drugs for personal consumption or use unless proven that he or she is licensed to do so by a medical prescription or as per the provisions of this law. In Bahrain, the law punishes with imprisonment of at least six months and a fine of no more than ten thousand Bahraini Dinars (26,500 USD), anyone who possesses, procures or purchases drugs for unauthorized personal consumption or use (Kingdom of Bahrain, 1973). No part of this law mentions punishment for consumption.

Legal sanctions for drug consumption or dependence

Some laws in MENA countries, however, do penalize drug consumption, even if the consumer is not in possession of the drug, if it can be proven that there has been drug use, according to technical and medical criteria set by the law.

In Qatar for instance, the law differentiates between possession for the purpose of consumption and actual consumption, and punishes both with penal sanctions (State of Qatar, 1987). Punishment for the possession of drugs for personal use is by

imprisonment of no less than two years and no more than five years in addition to a fine of between fifty and one hundred thousand (13,700–27,500 USD) Qatari Riyals, and actual consumption of drugs is punished with imprisonment of between one and three years in addition to a fine of between ten and twenty thousand Riyals (2700–5500 USD). It should be noted that the judge can impose only the minimum fine and avoid using imprisonment under this law.

Libya also distinguishes between possession for the purpose of consumption and actual use, even if both are punished with the same sanction, which is one of the strictest amongst the Arab states (Libya, 1990). Article 37 rules imprisonment with a two-year limit and a fine of one-to-five thousand Libyan Dinars anyone who possesses or procures drugs or psychoactive substances for personal use or anyone who has consumed these substances without authorization.

In Algeria, the legislation cites imprisonment of between two months to two years in addition to a fine from five to fifty thousand Dinars (50–500 USD), or one of the two sentences for every person who illegally consumes or possesses drugs or psychoactive substances for personal consumption (Republic of Algeria, 2004). It is noted that the Algerian drug law is the first in MENA to give precedence to prevention over punishment, as it states preventive and treatment measures before penal judgments. It also makes treatment the basis of the legal response to drug use, and sanctions are not enforced if and until the treatment is refused. In addition, returning to treatment when necessary is not prevented even in cases where the treatment decision was previously refused (Article 9 of the law).

Sanctions on drug consumption have been reduced for the following reasons: First, punishment for possession or consumption would be imprisonment of between two months and two years. This is a lighter sentence than lockup or hard labor and indicates that drug consumption or possession for personal consumption is considered a misdemeanor rather than a felony; second, the law authorizes the judge to choose between imprisonment and a fine and does not force him to combine the two and third, the judge's authority to determine the sanction provides some autonomy as to whether imprisonment or a fine is chosen, as there are large differences between the minimum and the maximum limits.

In the UAE, the federal law punishes any unauthorized consumption or personal use of any drugs or psychoactive substances (UAE, 1995). Sanctions vary according to the type of drug. The most severe sanction is imprisonment of at least four years, followed by imprisonment of at least one year and no more than three years, with the possibility of a fine of no less than ten thousand Dirhams (3000 USD) (Articles 39 and 40). This law also punishes anyone who consumes or uses personally a non-scheduled substance whether or not its use was for narcotic effect. The Emirati law criminalizes consumption of drugs that could be consumed for medical reasons where the consumer does not obtain a medical prescription.

The Tunisian law punishes with imprisonment of one to five years and with a fine of between one and three thousand Dinars (500–1500 USD), any person who consumes or possesses a plant or a drug in a case unauthorized by the law (*Official Journal of the Tunisian Republic No. 33, 1992*). It also punishes the attempt to consume or possess drugs with the same sanction. Therefore, the Tunisian law punishes the possession for the purpose of consumption and for the actual consumption even if there is no possession involved (Chapter 4). Moreover, Article 12 prohibits the use of mitigating factors in sentencing. Of the 25,000 people incarcerated in the country, 8000 are for drug-related offenses (*Amraoui, 2015*).

In Morocco, the law punishes with imprisonment of between two months and one year in addition to a fine, or one of the two sentences, anyone who illegally uses drugs or plants (*Official Bulletin No. 3214, 1974*). It is noted that the Moroccan law is less strict than any other in MENA in punishing drug consumption. Imprisonment is for a shorter time period and in some cases only a fine may be imposed. In 2014, 31% of the cases treated by tribunals in the country were related to illicit drugs, be it consumption or trafficking, with 80,000 people prosecuted (*Midech, 2015*).

The Jordanian law punishes with imprisonment of one to two years and a fine of between one and three thousand Dinars (1500–4500 USD) anyone who consumes, possesses or procures a drug for consumption purposes, and also anyone who plants or purchases any plant that produces drugs for consumption (*Hashemite Kingdom of Jordan, 1988*).

In Sudan, the law punishes with imprisonment for a period no longer than five years and a fine of no more than five thousand Pounds (850 USD), any person who consumes, imports, purchases or possesses any type of drugs or psychoactive substances for consumption in cases unauthorized by the law (*Republic of Sudan, 1994*). It also punishes with the same sanction anyone who cultivates a plant for extraction of the prohibited substance for consumption (Article 20-1).

The Lebanese legislation punishes with imprisonment of between three months and three years and with a fine, whoever possesses, procures or purchases a small quantity of high risk substances without medical prescription and for consumption purposes (*Republic of Lebanon, 1999*). It punishes with the same sanction whoever is proved to be addicted to consuming such substances and fails to abide by treatment procedures imposed by the courts. Sanctions are more severe if the person is a professional worker in the health field (Article 127).

Legislation on mandated drug treatment in MENA

Laws in MENA countries can mandate drug users to seek treatment. However, the use of mandatory treatment remains an exception, as most law relies on punishment to reduce drug consumption. The discretionary power of the criminal judge is also established in most of the drug legislations and this authorizes the judge to make the final decision, following proof of conviction and sentence pronouncement, or following proof of conviction and prior to pronouncing the sentence.

Egyptian drug law indicates a commitment to treatment as an alternative to executing custodial time and financial sanction. For example, the court is entitled to order that sentenced time be served in prisons designated for people convicted of drug crimes or in places allocated to drug users in punitive institutions. The court is also able to order the admission into treatment or rehabilitation centers upon ruling if it is proven that the convicted offender is drug dependent. This is an alternative to custodial sanctions and fines to provide the dependent user medical, psychological and social follow-up. The offender is then required to remain in the center for at least six months and no longer than three years or the sentenced sanction period – whichever is less. Release after recovery is determined by a supervisory committee at the center. If proven that admission was unsuccessful or the maximum period decided upon expired before the offender has recovered; or the offender violates the duties imposed on him or her or has committed any further drug crime during admission; the committee can notify the court to cancel the stay and any remaining sentence time would be served in custody (*Arab Republic of Egypt, 1989*).

This is also the case in Qatar and Libya, where the courts are entitled, to order admission into a treatment center as an alternative to criminal sanction. The offender would remain there until an expert committee which follows the progress of such cases, submits a report to the court regarding release or extension of stay. The period of mandated treatment in Qatar is three months to one year, while in Libya it is six months to one year (*State of Qatar, 1987; Libya, 1990*).

In Iraq the drug laws differ in this matter. The court authority can order the admission of any person proved to be dependent on drugs “as a result of a previous medical condition” into a rehabilitation or health center assigned by the ministry for this purpose, for treatment of up to six months (*Republic of Iraq, 2002*). However, if the court detects that the problem drug use was not as a result of a medical condition, it can still order admission into treatment but it will also impose the criminal sanctions. Iraqi law is the only one in MENA to distinguish between drug dependent users in this way; a dependent user by ‘free will’ shall not benefit from treatment while dependence resulting from medical problems shall be treated.

In the Maghreb countries, legislation embraces the principle of treating dependence in compulsory centers or hospitals as an alternative to incarceration. The Maghreb is constituted of 5 countries: Algeria, Libya, Mauritania, Morocco and Tunisia. They are part of a sub-regional organization, the Union of Arab Maghreb, established in 1989. According to Article 7 of the Algerian law, the examining magistrate or juvenile judge may order detoxification, accompanied by medical surveillance and rehabilitation for any drug user whose condition requires these measures (*Republic of Algeria, 2004*). The court’s judicial authority, in this case the specialized judicial authority, may also rule exemption from sanctions (Article 8). According to Article 9, incarceration and fines shall only be applied to anyone who refrains from executing the decision to undergo detoxification. In Tunisia, the court may, force the convicted offender to undergo detoxification for a period set by a specialized doctor at a public hospital. If the detoxification is refused, a permit can be issued by the president of the court forcing the offender to undergo this measure (*Official Journal of the Tunisian Republic No. 33, 1992*). The Moroccan law also stipulates that the examining magistrate and the ruling panel can order treatment instead of pronouncing sanction (Chapter 8 of the law) (*Official Bulletin No. 3214, 1974*).

Lebanon is unique in having a special ruling stipulated in Article 151, which authorizes the court to combine sanction and

compulsory treatment. The text of Article 151 reads: “In the event of pursuing and convicting a drug addict, the court may force him, in addition to paying a fine, to undergo dependence treatment or other care measures stipulated in this law” (Republic of Lebanon, 1999). Yet, this is not applied unless the convicted offender does not willingly undergo physical and psychological treatment before prosecution. The basis of the Lebanese drug law is to automatically undergo the dependence treatment and thus the judicial pursuits are halted. However, if prosecution takes place, then treatment will be provided to the offender within the penal institution.

The situation is similar in Bahrain where the court may order admittance to hospital for treatment anyone proven to be dependent on drugs while being sentenced with sanctions for drug possession. The period of admission shall be deducted from the period of the sentenced sanction. This means that admission is not an alternative to executing the sanction but part of the prison term or a type of punitive treatment method (Kingdom of Bahrain, 1973). Completing treatment at the hospital does not exempt the convicted offender from executing the remaining sanction period following the deduction of time spent in the hospital. The Bahraini law simply sends a recovered dependent drug user to prison to finish the remaining sanction, enhancing risk of relapse. Dependence cannot be described as a crime and a sickness at the same time (Fig. 1).

Termination of the criminal lawsuit

In Arab legislations there is one provision to terminate a criminal lawsuit for drug use and request dependence treatment instead. This request can be issued by the convicted user or any of his or her relatives.

For example, Article 37 bis (a) of the Egyptian law stipulates that the criminal lawsuit is terminated when the convicted user voluntarily requests treatment. In this case, the drug user remains under treatment until the treatment center’s supervising committee decides to release him. In law, the status of the individual changes from convicted offender to “sick person” (Arab Republic of Egypt, 1937). This is also the case in Lebanon (Republic of Lebanon, 1999).

Other Arab drug laws promote voluntary requests for treatment, although some set a maximum treatment period. The Emirati law, for instance, specifies a treatment and

rehabilitation period of a maximum of three years (Article 43). Under Tunisian law, no period is specified; therefore the convicted user remains in treatment until the expert committee decides to release him. Moroccan law stipulates the termination of treatment when a doctor determines that recovery has been achieved. The Omani law also omits to determine a maximum limit for treatment (Article 51) (Sultanate of Oman, 2000). And in Jordan the law requires that the drug user volunteers for treatment to an official authority before being caught for any illegal activity (Article 41d). Yemeni law specifies the termination of a criminal lawsuit for anyone who voluntarily undergoes drug treatment and remains at the treatment center until release is decided. The stay period is between six months and two years (Article 38-2). This is also the case in Sudan (Article 20-2).

Legislation to protect drug users confidentiality

A rare provision to protect the dignity of convicted drug users and to guarantee their privacy involves legislation which imposes a legal commitment for health workers to keep information about a patient’s drug use and treatment confidential and to punish any disclosure of such information. It is to be noted, however, such commitment is also imposed by the duties of the medical profession.

For example, Egyptian drug law stipulates that all information and data known to the workers in drug treatment be considered confidential, and the disclosure of which shall be punished. The Saudi anti-drug law stipulates the necessity to treat as confidential the identity of the convicted drug user and all information related to him or her. The Omani drug law also protects the confidentiality of patients who are treated for dependence or who attend the center for any kind of treatment. The Jordanian drug law demands complete confidentiality of the identity of the people being treated for problem drug use and on any information or facts related to them. The Lebanese drug law also rules upon the necessity of maintaining professional confidentiality towards addicts who undergo treatment.

Overall, dependence treatment in Arab countries needs a scrutinizing field study to understand the extent of the response from concerned authorities to the specified commitments imposed by the law.

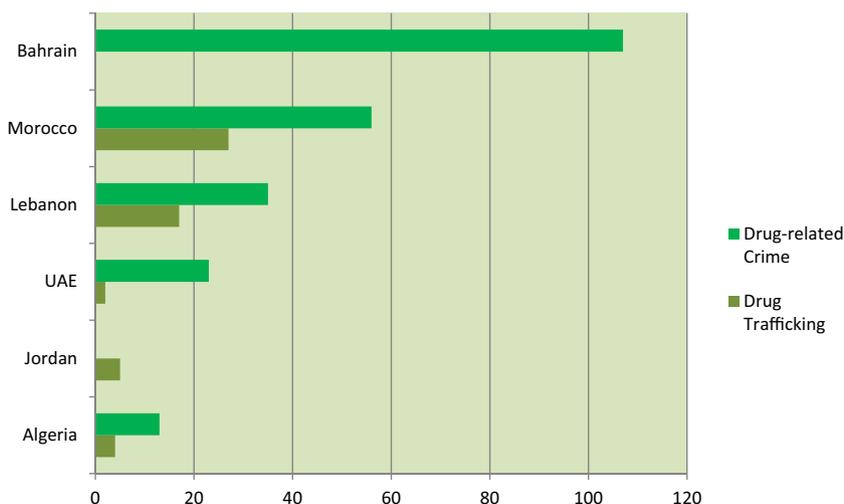


Fig. 1. Drug-related total prison population in MENA countries, per 100,000 population, in 2006 as reported to the United Nations Survey on Crime Trends (UN-CTS) (UNODC, HEUNI, 2010).

Conclusion

Considerable efforts are put into controlling the possession and consumption of drug use in the MENA region. Being a production region for many substances, a traditionally consumption region of plant-based drugs, and a production and transit region for manufactured illicit drugs, the Arab countries of which legislations have been reviewed in this article have mitigated results. Whilst overall prevalence of use of all sorts of drugs is low compared with many other global regions, it is nevertheless increasing. Incarcerated people for drug-related offenses represent a third of the total prison population, where data is available. No data has been found on overdoses or on the outcome of mandatory treatment.

Arab drug legislations address both drug dependence and drug consumption with similar policies and sanctions. Moreover, many laws consider drug possession and drug trafficking with similar sanctions, with no quantity criteria. Even where there are legal provisions to privilege treatment over incarceration, these are used infrequently and in only two countries, Algeria and Lebanon, do the drug laws prioritize treatment over imprisonment of drug users. These laws apply the same sanctions for all types of drugs, while many of the Arab national laws include two schedules, one for narcotic drugs and the other for psychotropic substances.

The major issue with these laws is the lack of differentiation between drug users and dependent drug users. However, very little is known about the effects of treatment programmes – either their quality or outcomes (Burris & Chiu, 2011) – for convicted drug users who either enroll voluntarily or who are forced to do so. Moreover, despite the existing evidence that compulsory treatment violates the basic human rights of drug users, it remains in place in many MENA countries (United Nations General Assembly, 2010).

As international debates examine the broader implications of drug control on areas such as public health, human rights and new challenges (Commission on Narcotic Drugs, 2015), national legislations in MENA continue to rely heavily on harsh punishments for drug use, not taking into account the existing evidence on successful and failed drug control policies. While the three UN drug conventions do not call for the criminalization of possession or consumption of small amounts of illicit drugs (United Nations Office on Drug and Crime, 2014a), Arab national legislations continue to treat drug users as either criminals or “sick persons” (the term used in many national laws). Finally, it is difficult to foresee, through the analysis of the drug laws in MENA and the amendments to some in the last decade, any possible reform towards proportionate punishment for minor drug-related offences in the short term.

Conflict of interest statement

The authors declare no competing interests. FS declares having produced a similar but more comprehensive published legislative analysis for the Global Commission on HIV and the Law in 2011.

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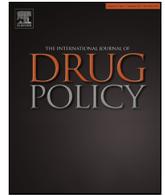
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Policy analysis

Implementing opioid substitution in Lebanon: Inception and challenges

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ABSTRACT

Opioid Substitution Treatment (OST) is a firmly established method of treating and managing dependence to opioids in Europe, the US and rest of the developed world. It has a solid evidence base and a positive safety track record. Dissemination of its practice, in parallel to the acceptance of harm reduction as an effective approach, is still timid in low and middle Income countries. After years of advocacy on the parts of clinicians and the voluntary sector, the government of Lebanon launched a national opioid substitution program in 2011 using buprenorphine as the substance of substitution. Lebanon is one of the first countries in the MENA region to establish such a program despite a difficult socio-political context. This paper provides the background of harm reduction efforts in the region and presents the outline of the program from inception to present date. Challenges and recommendations for the future are also discussed. The Lebanese experience with opioid substitution is encouraging so far and can be used as a template for others in the region who might be contemplating broadening the range of services available to tackle addiction to heroin and related substances.

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The implementation of harm reduction services is a major component of the global response to limit the spread of HIV in addition to rehabilitating those struggling with addiction (UNODC, 2014). Harm reduction, of which Opioid Substitution Treatment (OST) is an essential component, is an approach aimed at mitigating the risk-taking behavior associated with substance use. It can complement abstinence-based treatments and has proven effective in controlling the spread of dependence to opioids (Clark et al., 2013; Hall and Carter, 2013; Wu, 2013; as cited in Wu & Clark, 2013). It has also led to a significant decline in the incidence of HIV, in deaths due to unsafe injecting drug use and in levels of criminality (UNODC, 2014). Guidelines for the Psychosocially Assisted Pharmacological Treatment of Opioid Dependence issued by the World Health Organization recommend maintenance on the full agonist methadone or the partial agonist buprenorphine coupled with counseling and/or contingency management (CM) (WHO, 2009). Opioid Substitution Treatment (OST) is now the mainstay of treatment in many developed countries. This paper aims to report on the implementation of a national OST program in Lebanon.

Opioid substitution in the MENA region

In 2014, 80 countries and territories across the globe with an overrepresentation of high-income countries were implementing some form of OST. Methadone and buprenorphine were the most commonly used medications (Harm Reduction International, 2014). In around 50 other countries, the primary mode of treatment was still the traditional sequence of detoxification and residential rehabilitation (MacArthur et al., 2012).

The concept of harm reduction has slowly been gaining ground in the Middle East and North Africa (MENA) region, despite strong initial resistance from authorities and traditional drug treatment circles. An estimated 626,000 people inject drugs in the region. This is suspected of being the leading cause of HIV transmission in Bahrain, Iran and Libya (Harm Reduction International, 2014). A scale up in initiatives has been noted since 2010 (Harm Reduction International, 2014). Since 2007, The Middle East and North Africa Harm Reduction Association (MENAHR) – based in Beirut, Lebanon – has been an effective advocate for increased governmental and sociocultural attention on this issue. It relied on support from global funders and effective partnerships with regional organizations to unroll a series of conferences, training seminars and policy workshops that brought together lawmakers, frontline staff, religious and moral authorities (MENAHR, 2012).

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Its role and that of others in bringing down official resistance to opioid substitution cannot be underestimated.

To date, five countries have provided OST at any one time: Bahrain, Lebanon, Iran, Morocco and United Arab Emirates (UAE). In Bahrain and UAE opioid substitution is only available in restricted facilities and mainly for the purpose of inpatient detoxification and rehabilitation. Morocco is reported to have six dispensing sites. Similarly, Kuwait began piloting OST services in 2014 and Oman had just given permission to trial a service on a small scale (Harm Reduction International, 2014). With an estimated 4275 dispensing centers, Iran has been a regional leader in outpatient medium to long-term maintenance substitution. This effort was initially in response to the HIV epidemic amongst inmates at Iranian prisons. Preventive measures including opioid substitution and a needle exchange program were implemented in Iranian treatment facilities (Harm Reduction International, 2008). In parallel, needles and syringe exchange programs (NSPs) have operated in Five Arab countries: Egypt, Lebanon, Morocco, Palestine and Tunisia (MENAHRA, 2012).

Opioid use in Lebanon

Lebanon is a country of 4 million inhabitants on the shores of the eastern Mediterranean. It is a parliamentary democracy and a member of the Arab league. Its population is diverse both religiously and to a lesser extent ethnically, with wide socio-economic variation. This combination of factors contributed to political instability since its independence from French mandate in 1943; a full-blown civil war between 1975 and 1990; and a state of near-hibernation for government apparatus. The impact on the health system has been significant and delayed the development of specialist services, including those for addiction treatment.

In Lebanon, drug use is considered a criminal offense normally warranting jail term. It remains a common cause of incarceration. On average, 2000 drugs users were convicted yearly between 2010 and 2012 according to official records provided by the Lebanese interior security forces (ISF Report, 2010, 2011, 2012). In Lebanon, Heroin is the primary opioid-based substance of abuse. Eighteen percent of those convicted for those same years were so for Heroin use, making it the third most used substance after Cannabis and Cocaine, respectively.

Heroin is also the most frequently used substance, alone or in combination with other drugs, amongst those seeking medical assistance and treatment for addiction (MOPH Report, 2010, 2011, 2012). In a survey of Lebanese rehabilitation and detoxification centers, opioid users accounted for 31% of the total number of individuals in treatment (MOPH Report, 2012) (Fig. 1). In terms of age distribution the largest group in treatment was in the 29–38 age range, followed by the 18–28 age range, with an overwhelming predominance of males.

The prevalence of communicable infectious diseases, in particular HIV, Hepatitis C and Hepatitis B remains disproportionately high among injecting drug users worldwide. In a sample of

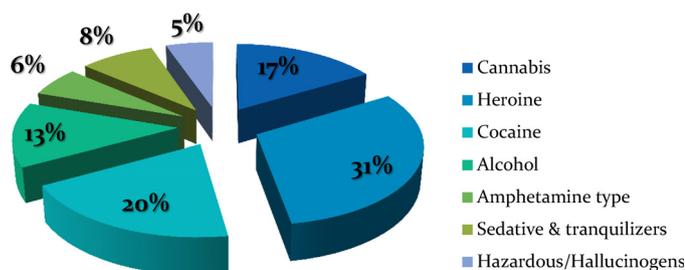


Fig. 1. Substances abused by individuals seeking treatment for addiction in Lebanon in 2012.

956 persons tested for these viruses from eight Lebanese treatment and detoxification centers during the year 2012, 27.7% were found to be positive for Hepatitis C. This was a slightly higher percentage than previously estimated. Only two patients were positive for Hepatitis B (0.67%) and no cases of HIV infection were identified (MOPH Report, 2013).

The implementation of opioid substitution in Lebanon

It was the concerted effort by international donors and organizers to stem the spread of HIV/AIDS and related blood-borne viruses in the MENA region that brought forward opioid substitution on the national agenda in Lebanon. Previously, individual patients that had been initiated on substitution abroad were treated by a small number of local doctors on their return to Lebanon. Despite anecdotal success stories, the absence of a reliable supply chain and a monitoring framework would have rendered such efforts futile on the long run.

By 2011, both buprenorphine (2 mg and 8 mg) and methadone (1, 5, 10, 20 and 50 mg) were registered with the Lebanese Ministry of Public Health (MOPH) as controlled substances requiring special measures for prescribing and dispensing. Buprenorphine, a semi-synthetic mu opioid partial agonist with weak partial agonist effects at both delta and kappa opioid receptors, was approved by the US Food and Drug administration (FDA) in 2002 for office-based treatment as a detoxification and maintenance treatment for opioid dependence. Both treatments are equally effective at reducing opioid dependence (Johnson et al., 2000). When the OST program was officially launched in December 2011, buprenorphine was considered more suitable for the treatment settings available in Lebanon due to its pharmacological characteristics and its safety profile. This situation remains unchanged to this date.

An official decree number 899/1 specified the responsibilities of treatment providers, governmental agencies and patients in comprehensive clinical guidelines inspired by international recommendations. Implementation and monitoring of the OST program was assigned to a task force committee chaired by the head of the narcotics department within the Ministry of Public Health and included most stakeholders consisting of representatives from the Ministry of Interior, the National AIDS Program, the United Nations Office on Drugs and Crime (UNODC), the Lebanese Psychiatric Society (LPS) and frontline clinical staff from the voluntary and private sector.

During the initial phase, the MOPH partnered with UNODC and LPS to provide adequate training to relevant healthcare professionals. These included psychiatrists, who would be the sole authorized prescribers of buprenorphine, pharmacists at selected dispensing government hospitals in addition to nurses, psychologists and social workers who would be in contact with patients.

An electronic web-based information system (OSTIS) centralized within the department of narcotics at the MOPH was funded with the support of UNODC. Its interface was designed for easy access by the prescribing psychiatrists, the dispensing pharmacists and dedicated coordinators at the ministry.

A protocol was designed, approved and disseminated. Admission into the program would be dependent upon referral by a psychiatrist authorized to prescribe buprenorphine in Lebanon and working within pre-registered treatment settings. These were NGOs with a track record in treating drug addiction such as the Lebanese Addictions Center (Skoun), Soins Infirmiers et Développement Communautaire (SIDC/L'Escale), Association Justice et Misericorde (AJEM) in addition to hospitals and specialist clinics, all based in Beirut and its suburbs. They had in common the minimum provision of a multidisciplinary team consisting of a psychiatrist, psychologist, social worker and a registered nurse. The cost of treatment could vary from a heavily subsidized fee at

community centers to hundreds of dollars monthly at specialist private clinics, including drug testing but excluding the cost of medication. The diversity of settings helped cater for patients with different treatment needs.

The online assessment form provided an overview of the patient's demographic background, his history of substance use and broader medical status. Particular emphasis was placed on previous treatments, psychiatric co-morbidities and exposure to infectious diseases. A confirmed diagnosis of dependence to opioids based on DSM-4 (APA) or ICD-10 (WHO) criteria was deemed essential. At least one previous attempt at treatment using other modalities, such as detoxification and/or rehabilitation was also required.

All referrals were checked by the central coordinator prior to acceptance into the program. Families or peers were also encouraged to involve themselves in the treatment. Patients were required to identify a named person to collect medication on their behalf and act as point of contact in the case of an adverse event (Fig. 2).

On a weekly basis patients provided a urine toxicology sample and met with their prescribing doctor or a qualified assistant. They

would then attend an assigned dispensing center with the required paperwork and obtain a one-week supply of buprenorphine based on a steady daily dose. Satisfactory adherence would allow a move to two-weekly prescriptions three months later. Poor adherence, erratic attendance, evidence of diversion and repeated positive toxicology tests were all valid reasons for terminating the treatment. Direct communication on these matters between various agencies was encouraged. The centralization of data allowed for regular auditing of the program and its impact on the health and wellbeing of those enrolled in it. The retention rate was considered a significant outcome measure, as is the case for any treatment.

Between December 2011 and December 2014, 1244 patients were referred to the OST program (Fig. 3). Most were young males aged between 26 and 35. Only 6% were females. Half of these were during 2012 with a slower pace of enrollment observed year on year since. 98.8% of those referred were successfully enrolled. The rest either did not meet eligibility criteria or failed to complete the necessary procedure following the initial consultation. A comprehensive evaluation of individual progress was performed after 6 months 71% of those enrolled were still in active treatment

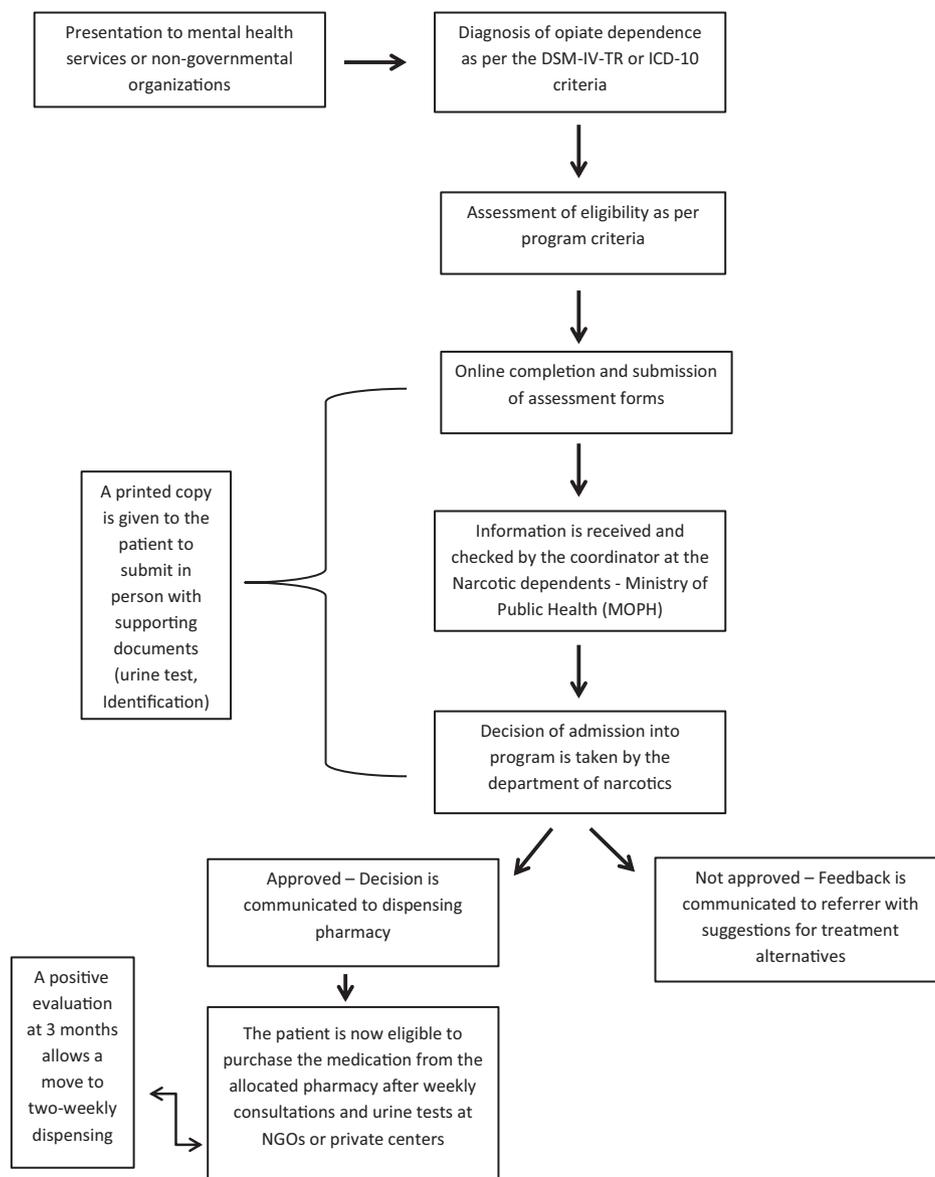


Fig. 2. Patient flowchart through program.

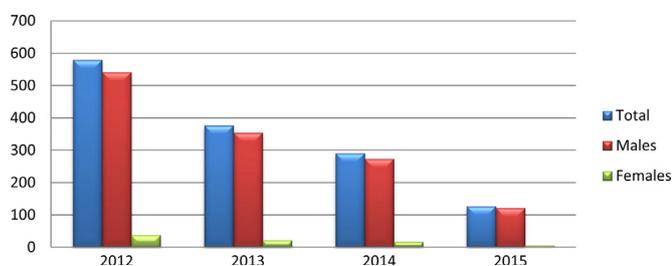


Fig. 3. Enrollment in the national OST program 2012–2015.

by the end of 2014. 15% of these had been lost to follow-up and re-enrolled at least once during that period. Outcome measures used to establish success were regular attendance, negative urine tests for opiates primarily but also other substances. Additional factors such as psychosocial stability and absence of criminal behaviors were also considered.

Evaluation of relapsed cases showed a high correlation between early poor adherence to program regulations and treatment discontinuation. Other causes for treatment failure included imprisonment for new or pending legal issues and financial problems. No deaths by overdose involving buprenorphine have been recorded since the inception of the program.

Evaluation and challenges ahead

Communication between healthcare providers

From the onset, one major limitation to implementation was the shortage in human resources experienced in delivering opioid substitution. Four pharmacists at two governmental sites were assigned and trained at the dispensing of buprenorphine. Dispensing units, like treatment centers are often environments where patients interact outside the control of healthcare providers. This informal interaction can have negative implications if not monitored or at least discussed with the patient, who is at risk of exploitation, manipulation or simply encouraged into relapse. It is not unusual for patients to drop out of treatment to avoid this pressure or simply for security or stigma-related reasons. Ideally, the interaction with the pharmacist should count as a comprehensive clinical contact where vital feedback on the presentation and behavior of individuals is shared with the ministry and the prescribers. The limited number of pharmacists and the rapid growth of the program beyond initial projections have led to a relative loss of this role and inability to triangulate information promptly enough. The absence of established lines of communication with prescribers and the reluctance of pharmacists to make contact with them placed a burden on the central coordinator.

Our experience so far reaffirms the need to improve the relation between prescriber and dispenser. The use of information technology should be encouraged and the tools refined as the program evolves. The generation of electronic alerts would be one welcome addition to OSTIS. The dignity and privacy of every patient should also remain a priority. While the ministry is part of a central government authority, the confidential management and storage of personal data should also be audited.

Absence of local prescribing guidelines

Psychiatrists in Lebanon generally receive training in addiction medicine as part of their postgraduate psychiatric training. A small number had been exposed to opioid substitution in the US, France and the United Kingdom. All those who were later authorized to prescribe buprenorphine in Lebanon had to be vetted by the

Lebanese Psychiatric society and received a brief didactic training session on the subject. In the absence of an international consensus on prescribing and of local references, a wide variability in prescribing habits was noted.

Analysis of data showed significant disparities in retention rates between different prescribers. This could be due to different treatment strategies, from induction to maintenance. Evaluation of 949 OST patients during a follow up period of 36 months showed a significant higher retention rate seen in patient on 16 mg/day and above compared to patients on lower doses (MOPH Report, 2014). This finding was consistent with international evidence. A meta-analysis of 21 studies showed that higher buprenorphine dose (16–32 mg per day) predicted better retention in treatment compared with doses less than 16 mg per day (Fareed, Vayalappalli, Casarella, & Drexler, 2012).

Monitoring and supervised dispensing

One major shortcoming of the program is the absence of supervised dispensing, particularly in the crucial initiation phase, where dropout rates are high. Our understanding is that a lack of resources was behind this limitation. Daily supervised dispensing for hundreds of patients on two sites shared with a general hospital require a logistical framework in terms of space allocation, risk management and a trained workforce. Decentralization of the program to smaller regional dispensing units would resolve some of these issues and facilitate adherence to the program. Despite Lebanon being a small country in size, heavy traffic and the absence of a public transport infrastructure makes movement between localities a true ordeal. From a motivational perspective, ease of access to treatment is an essential incentive. Decentralization would also reinforce the monitoring function of the pharmacist who would be handling a smaller caseload.

Patient and family education

Most patients enter the program at the height of their addiction when their primary concern is immediate physical relief from ongoing or anticipated withdrawal symptoms. It is also at this stage that they receive the bulk of information on buprenorphine and the treatment program. Buprenorphine can potentially cause unacceptable side-effects. Following chronic administration, sudden cessation of buprenorphine produces a relatively mild yet prolonged withdrawal syndrome that is extremely distressing to some. Initial warnings are often ignored leading to avoidable relapses and misuse of the medication. The provision of refreshers to the patient and his family on the risks involved in abruptly interrupting treatment and the importance of practical and financial commitment to the program is essential. Ongoing general and specific health education would be beneficial.

The role of psychological intervention

Patients who enroll in addiction treatment programs vary in their reasons, commitment, willingness and readiness to change. Motivation has become widely recognized as a significant element in improving uptake and retention (Copenhaver, Bruce, & Altice, 2007). Therefore, a significant amount of work goes into assessing the patients' motivation prior to enrollment into treatment. This assessment is not meant to be a barrier to treatment. In the spirit of harm reduction any improvement in the patients' condition is considered worthwhile. Instead it allows a better tailoring of the treatment package to the patient's needs in order to optimize his/her chances of recovery. Studies have shown motivation to be a strong predictor in patients' retention in all treatment settings (Simpson & Broome, 1998).

While structured psychotherapy is not mandatory for patients enrolled in the program, some treatment centers enforce a policy of 'no therapy, no treatment'. This policy comes regardless of whether the patient is considered engaged in a comprehensive recovery effort or not. Others use informal counseling through peer educators and support networks. Aside from the prevention of simultaneous substances use, the aim of therapy is to encourage a mental shift towards a healthier overall lifestyle and to address psychosocial issues that had either led to dependence or maintained it. The discrepancy in approach between the treatment centers provided a relative flexibility and led to self-selection on the part of the patients. A core group of treatment-resistant individuals would move from stricter treatment centers to the more permissive ones, still within the boundaries of the program.

Infectious diseases

The prevalence of Hepatitis C infection amongst intravenous drug users in Lebanon is concerning. Yet harm reduction efforts in the region have been primarily tied to HIV and relatively few programs have targeted Hepatitis C prevention, testing and treatment. While it is difficult to draw a direct causal correlation, it is worthwhile mentioning that the percentage of opioid dependent individuals found positive for Hepatitis C significantly dropped from 27% in 2011 to 16% in 2014. These figures were retrieved from similar samples of drug users seeking treatment or rehabilitation (MOPH reports from addiction and treatment centers, 2014).

Collaboration with the security forces

Another major gap in the program is the absence of any formal arrangement for service provision in the prison system. Patients arrested and incarcerated were often forced into withdrawal without access to medical care. Some were later able to obtain buprenorphine through family members while others relapsed into various forms of substance use, including heroin and prescription medication (benzodiazepines, anticholinergics etc.). This was noted as a major obstacle to sustained recovery in a number of patients on OST. One organization supports prisoners in some of the main prisons but the matter of consistent buprenorphine dispensing remains unresolved despite the ministry of Interior being represented in the task force.

Diversion and trafficking

With the growth in numbers of patients integrated to the program, a black market for buprenorphine seems to have emerged within the circles of substance users. This is consistent with experience from other similar programs (Lavonas et al., 2014). There is no widespread evidence of buprenorphine becoming a gateway drug to other opioids amongst drug-naïve individuals. Instead, experienced and less experienced established opioid users would alternate between buprenorphine and other substances (heroin, tramadol, codeine) depending on availability and their evolving personal circumstances. Still, buprenorphine was often more expensive than heroin, tramadol and codeine based preparations, which prevents it from replacing them as a primary substance of abuse. The implementation of supervised dispensing, at least in the early phases of induction would ensure that only the committed patients are enrolled in the program and would likely reduce the amount of buprenorphine being diverted for inappropriate use. Another form of diversion was the 'shooting up' of buprenorphine intravenously. This is more difficult to enforce with take-home medication. The replacement of buprenorphine with buprenorphine-naltrexone preparation is being considered.

Engaging females in treatment and identifying their specific needs

The number of females in the program stood at 6%. It remains unclear whether this is in proportion to the total population of female opioids users or not. On the other hand, treatment settings can be male dominated and intimidating to young women already vulnerable to exploitation and violence. The creation of gender sensitive services should be considered following an assessment of the specific health and social needs of this population.

Discussion

The introduction of opioid substitution to Lebanon has had a significant impact on clinical practice in a relatively short period of time. Few recent healthcare initiatives have had an impact of such magnitude. Yet, it has proven to be difficult in finding evidence to the success of the program in the absence of reliable figures on the wider picture of the opioid problem in Lebanon. Some epidemiological studies suggest that Lebanon's substance use problem is not negligible (Karam, Ghandour, Maalouf, & Yamout, 2003) and that its size among youth replicates findings from North America (Ghandour, El Sayed, & Martins, 2012). More detailed analysis of injectable drug use is lacking. Difficult collaboration between government agencies has hindered the process of establishing the impact of the program on the legal and criminal activity related to drug use.

The national OST program is likely to remain at the current level of operation with minor adjustments in the absence of fresh funding that would allow for improved monitoring and evaluation. Empowering the task force or an equivalent expert steering committee to take executive decisions would allow for the smooth implementation of a series of measures, such as supervised dispensing in regional centers, standardized comprehensive drug testing and the introduction of methadone and the buprenorphine-naltrexone combination. These would particularly benefit the more challenging sub-populations of opioid users. Cutting operational costs through specialist nurses prescribing under medical supervision could improve affordability and compete with the cheap availability of Heroin. Despite the diversion of some buprenorphine by those who continue to use other opioids in parallel and others who inject it intravenously, the individual and communal benefits continue to significantly outweigh the harm.

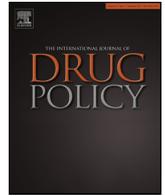
Ideological and practical hurdles prevent its implementation regionally. Any country with a similar social cultural and economic environment interested in introducing OST should be aware of its limitations and the need to maintain and develop other services in parallel. The interface with the judicial powers and the prison system needs to be prioritized while optimization of resources should follow the latest evidence. Promotion of the new paradigm in addiction treatment to gain public acceptance should accompany all these steps. It is important that agencies responsible for the promotion of Opioid Substitution Treatments familiarize themselves with the cultural context, the legal framework and regulatory procedures in targeted countries (UNODC, 2012). The logistical setup should preferably be initially piloted on a small scale to enable the development and review of sound policies and guidelines prior to the implementation of OST on a national level. Contingency planning for unstable political and security situations should also be considered to avoid interruption of the supply chain.

Disseminating successes and challenges in implementation of harm reduction initiatives across the MENA region is essential to ensure the persistence of the program in Lebanon itself. The country is heavily influenced by shifting regional attitudes towards major social issues, with response to drug use and addiction remaining contentious. A return to a pre-OST era marked by

repeated inpatient detoxifications and an oversubscription to residential rehabilitation programs is not yet totally inconceivable, with significant potential harm to hundreds of individuals who are now dependent on buprenorphine for their recovery.

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Commentary

The state of harm reduction in the Middle East and North Africa: A focus on Iran and Morocco



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ABSTRACT

HIV/AIDS and hepatitis C among people who inject drugs are on the rise in the Middle East and North Africa (MENA) region. But the regional response to the epidemic falls short both in terms of the quality and scale of response. From the threat of the death sentence for drug offenses to the burden of refugees fleeing conflict, there are many legal, political and social barriers that hinder the introduction and expansion of harm reduction in the region. However Iran and Morocco are two pioneering countries and over the last decade they have been providing evidence that harm reduction is feasible and acceptable in MENA. Using different approaches, these two countries have overcome various obstacles and encouraged discussion and collaboration among stakeholders, including government, health professionals, civil society and community-based organizations. In so doing they have created an enabling environment to endorse a national harm strategy.

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MENA, drug use, and harm reduction

Illicit drug use is on the rise in the Middle East and North Africa (MENA).¹ Evidence suggests that over half a million people inject drugs in the region (Harm Reduction International, 2014; Mumtaz et al., 2014a). Regional conflicts and the location of the Balkan trafficking route, from Afghanistan to Europe, have been associated with drug consumption and dependence in the eastern part of the region (International Drug Policy Consortium (IDPC), 2014). Further, northern Africa is the end point of the West African and Sahel Region transit route for illicit drugs going to Europe (West African Commission on Drugs (WACD), 2014). Opiates (heroin and opium) and cannabis have been the

primary drugs of use in MENA, although the use of amphetamine-type stimulants, prescription drugs and new psychoactive substances is increasing (INCB, 2014). In many countries of the region, people who inject drugs (PWIDs) are among the most at-risk groups for blood-borne virus infections. There is evidence of an HIV epidemic occurring among PWIDs in at least one-third of MENA countries, most of which are facing emerging, concentrated epidemics. HIV prevalence among PWIDs ranges between 10% and 15% (Mumtaz, Weiss, & Abu Raddad, 2014). HCV prevalence is higher, with at least half of PWIDs being HCV-infected⁵. In some countries, and amongst some groups, prevalence has reached some of the highest worldwide levels – for example, Tripoli, in Libya has reported rates as high as 87% for HIV and 94% for HCV (Mirzoyan et al., 2013).

The response to the epidemic in MENA falls short both in terms of the quality and scale of response (UNAIDS, 2011). To date, MENA is one of the most underserved regions regarding harm reduction interventions, alongside the sub-Saharan African region. The current state of harm reduction may be roughly assessed via the ease of access to two essential harm reduction services, as defined by UN guidelines: Needle and Syringe Programs (NSPs) and Opium Substitution Therapy (OST) (WHO, UNODC & UNAIDS, 2013). Only three of the 20 countries of the MENA region have implemented this effective combination of services: Iran (2000), Morocco (2010), and Afghanistan (2010). Only NSP or only OST have been

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¹ There are 20 countries included in the definition of MENA for the purposes of this article: Afghanistan, Algeria, Bahrain, The Arab Republic of Egypt, The Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Syrian Republic, Tunisia, United Arab Emirates, West Bank, Gaza (Occupied Palestinian Territories), and Republic of Yemen.

implemented in six and two countries respectively (Harm Reduction International, 2014). Methadone Maintenance Treatment (MMT) is the most common OST and (Rahimi-Movaghar et al., 2013) access to these essential HIV prevention interventions is limited except in Iran.

Structural barriers to harm reduction in MENA

MENA countries face common structural barriers that hinder harm reduction. The first is a largely punitive policy and legal environment. For example, 14 of the 20 MENA countries have legislation allowing for the death sentence for drug offenses – not only for trafficking, but also for drug possession. This means that drug users can be sentenced to death in more than two-thirds of MENA countries; this is true for less than one in six countries worldwide (33 of 193) (Harm Reduction International, 2012). Executions for drug offenses in certain countries accounted for 42% of all official executions in 2014 (Amnesty International, 2015). Beyond the death penalty, severe drug law enforcement in the region leads to high numbers of prisoners. A 2005 study in Morocco found that 46% of PWIDs had been incarcerated for drug use (Kouyoumjian et al., 2013). In Bahrain, not only is NSP banned but also people who use drugs may be arrested for possession of syringes (IDPC, 2014).

The second barrier is public health systems. In keeping with the social and institutional structure of most MENA countries, public health policy is driven mainly by a top-down approach (Razaghi & Binazadeh, 2015). Furthermore, drug use is commonly seen in the public and official mind as being associated with mental health disorders; as a consequence, the public health response to tackling drug use takes a mental health approach, requiring involvement of psychiatrists and physicians specialized in addiction treatment. For example, in Morocco, emerging harm reduction interventions have been devised under the umbrella of the mental health directorate in the ministry of health. It is worthwhile noting that the criminalization of drug users on a judicial level in MENA (and elsewhere) mirrors the approach to mental illness on a health level in that interventions to reduce and mitigate drug use, addiction, and associated harm have a basis in social control. This is some way from a genuine approach to harm reduction, where community involvement and “life experience” are highly valuable for devising and implementing harm reduction interventions (eds. Maguet, Debaulieu, & Luhmann, 2013). This depiction of the policy environment is evidenced by the fact that only six MENA countries refer to “harm reduction” in their national strategic plans. Furthermore, in other MENA countries, the types of health services available to people who use drugs are associated with rehabilitation and/or mandatory treatment – which is against the principles of harm reduction (Harm Reduction International, 2014). This social and institutional layout is not sufficiently challenged by the relatively weak commitment of civil society, including community-based organizations that seek to help drug users. But beyond local specificities, as in Morocco and Iran, there is a nascent movement to support MENA civil society, mainly through The Middle East and North Africa Harm Reduction Association (MENAHRRA) set up in 2007, and The Middle East and North Africa Association of People Using Drugs (MENAPUD) launched at the 2011 Beirut International Harm Reduction Conference.

The last barrier has more recently originated from the geopolitical regional setting. Since the 1980s, Afghanistan and neighboring Iran and Pakistan have been places of concern with respect to refugees and displaced people. But since 2011 many other countries in the region have been facing state breakdown and armed conflict. These conflicts and crises have led to a massive increase in the number of displaced people and refugees, with Syria being at the top of the list, comprising 3.7 million refugees, mostly

fleeing to neighboring Jordan and Lebanon, and 7.6 million internally displaced people. In northern Africa, Libya's failed state is another example of this new ever-evolving structural setting, with 400,000 displaced people and 37,000 refugees (UNHCR, 2015). To date, more than half of the world's refugees are located in MENA countries – Pakistan, Iran, Jordan, and Lebanon – constituting a main structural constraint, affecting national, regional and global priorities. A further issue is that the MENA region encompasses some of the most important worldwide production areas and trafficking routes for illicit drugs. Such settings encourage involvement in illicit activity, including wider access to illicit drugs, and draws the focus of international concern to drug control and counternarcotic. This nexus jeopardizes the development of a drug policy based on human rights and public health and fosters an unstable environment that is hostile to the implementation of harm reduction. This MENA specific environmental difficulties add to the more usual reluctance regarding harm reduction.

Strategies for improving harm reduction

As discussed, the development and implementation of harm reduction interventions in MENA are hindered by legal, political and social barriers. However, there is some hope coming from the boundaries of the region. Iran in the east and Morocco at the western edge are the two countries pioneering the introduction and expansion of harm reduction initiatives. They provide two different models of intervention that have been proved feasible in the MENA setting. This paves the way for other MENA countries to choose the most appropriate model of intervention for their local setting. On one side, Iran has adopted a top-down approach, while Morocco has implemented a more bottom-up approach. Focusing on the strategies adopted by Iran and Morocco will help learning about what can be applied throughout the MENA region.

Iran

Iran has the highest rate of opiate use in the region, with 2.3% of people aged 15–64 years misusing opiates (UNODC, 2013). While opium use has been a traditional practice among an older generation, heroin consumption and injection among young people aged 15–40 years has been a cause of worry for almost two decades (Alam-Mehrjerdi et al., 2015). Before 1999, government-run residential centers for heroin users, “Narcotics Anonymous” support groups, and short detoxification programs in outpatient clinics were the only available treatment programs in Iran. In the late 1990s, at a time when the country was struggling to find more effective treatment for drug use, the high prevalence of HIV among PWIDs drew the attention of policy makers to the harm reduction approach (Nassirimanesh, Trace, & Roberts, 2005).

The first opiate maintenance treatment and other fledgling harm reduction initiatives in the late 1990s and early 2000s were provided through the non-governmental sector; findings of concurrent academic research studies about rates of HIV prevalence in prisons had led to action from the Ministry of Health (MOH) and the first triangular clinic (TC) was established in the central prison of Kermanshah and then in other prisons. Methadone maintenance treatment (MMT) guidelines were developed, and drop-in centers providing outreach/out-patient services were expanded throughout the country (Alam-Mehrjerdi et al., 2015; Asl et al., 2013; Nassirimanesh et al., 2005; Razaghi et al., 2006). Of note, was the positive interaction between health, academic, governmental, and judicial sectors in recognition of drug use as a health concern, leading to the establishment of the harm reduction programs in Iran in the 2000s.

The first HIV outbreak known to have occurred in the 1990s in Iranian prisons was a turning point in helping to establish and expand harm reduction programs in prisons (Haghdoost et al., 2013). The TCs have been successful in providing MMT, NSPs, and voluntary HIV counseling and testing (Razaghi et al., 2006). As of 2011, 164 of 242 prisons, provided MMT and 128 had TCs in place (Shahbazi et al., 2014). Iran experienced the highest prevalence of HIV in prisons (3.83%) in 2002 and a dramatic decrease in HIV prevalence was not observed until 2005, when harm reduction program coverage was increased and the quality of services provided had been improved (Shahbazi et al., 2014; Rahimi-Movaghar et al., 2013). The changes implemented in the system have been largely attributed to the evaluation in place. The technical committees, comprised of experts from both prison organizations and the MOH, have established sentinel sites throughout the country, which has facilitated monitoring and evaluation of the HIV/AIDS services provided in prisons during the past decade (Alam-Mehrjerdi et al., 2015; Haghdoost et al., 2013; Shahbazi et al., 2014). A recent study analyzing pooled data from 397 sero-surveys on 155,771 prisoners since 1998, showed that the HIV prevalence has declined in the past decade from 4.5% in 1998 to 2.8% (Haghdoost et al., 2013).

The non-governmental sector has established drop-in centers and outreach teams throughout the country, supporting PWIDs in the community (Rahimi-Movaghar et al., 2013). Recently, women who inject drugs (WWID) have also been targeted successfully by a non-governmental organization (NGO) in Tehran (Dolan et al., 2012).

While Iran is known as a regional leader for implementing harm reduction policies; work remains to improve the impact of current interventions on reducing HIV prevalence (Rahimi-Movaghar et al., 2015). Of high importance is the scaling up of the current programs to include the nine interventions known as the “Comprehensive Package” Here we provide information on challenges faced by the system, based on the current evidence.

The first challenge is the introduction of new drugs. Since 2004, the rapid increase in the availability and use of a methamphetamine (MA) – known as “shisheh” – has imposed an additional burden on the healthcare system in Iran (Alam-Mehrjerdi, Barr, & Noroozi, 2013; Shariati, Maarefvand, & Ekhtiari, 2012; UNODC, 2013). As well as potential for increasing high-risk sexual behaviors, the trend for injecting, MA is causing concern. Condom promotion and safe sex education in current harm reduction programs are essential but also challenging in the conservative Iranian setting. There is, as yet, no medication for helping with abstinence from MA, although a Matrix Model based on Cognitive Behavioral Therapy has gained popularity. Psychiatric problems and long-term neurobiological defects may also be experienced post abstinence, and these need to be targeted through maintenance programs (Alam-Mehrjerdi & Noroozi, 2013). Another new drug, an analogue of opioid, combined with steroids named “norgesic” or “norjizak”, became a common drug of misuse in 2005. Injection of this drug has been associated with a high risk of HCV transmission, even when using sterile injecting equipment (Alam-Mehrjerdi, 2013).

The second challenge is stigma. A UNAIDS report highlights “stigma and discrimination” as a common background to the current programs in all countries of the MENA region (UNAIDS, 2011). Moreover, stigmatization of drug dependence, and specifically injection drug use, hinders access to intervention for drug users. In addition to the punitive laws, the stigma experienced by drug users at healthcare settings has played a major role in low uptake and coverage of harm reduction programs (Rahimi-Movaghar et al., 2013). As an example, evidence suggests that programs in Iran do not address “transition to injection drug use.” Many PWIDs have been non-injectors for several years before their

first injection (Malekinejad & Vazirian, 2011; Rahimi-Movaghar et al., 2015); hence, reducing the stigma around access to services for non-injecting drug users is a major step toward the “getting to zero” goal.

A third challenge is helping women, who constitute a particularly vulnerable population. In MENA region, “HIV data gaps” remain a serious concern for policy makers and health authorities (UNAIDS, 2011). Existing data suggest that most women living with HIV are infected by their spouses. These women perceive there to be no or little risk of acquiring the virus (WHO, 2012). However, understanding the hidden aspects of the epidemic requires more in-depth and comprehensive investigation. Economic hardships, scarcity of youth-friendly reproductive health services, lack of school-based sexual health programs, and an introduction to conflicting values through wide access to internet in the region, put young people in particular at risk for acquiring HIV – while “traditional gender roles” put young women at further risk (UNAIDS, 2013).

Marginalized groups have poor access to health facilities, and the stigma experienced by WWIDs or female sex workers (FSWs) is even more critical (Roshanfekar et al., 2015). The status of WWID in MENA is not well recognized. Higher stigma around female injection is a probable reason for women’s lower treatment-seeking behavior (Dolan et al., 2012). Globally, HIV remains the most common cause of maternal mortality while antiretroviral therapy (ART) coverage for the estimated number of pregnant women living with HIV has remained critically low in MENA (<5%). Despite improvements in the child and maternal health care indices in the region, the level of implementation of prevention of mother-to-child transmission (PMTCT) interventions is not properly considered by the stakeholders involved in primary health care (WHO, 2012).

Iran is experiencing a substantial rise in the number of women newly diagnosed with HIV; this trend has raised concerns about the increasing share of sexual transmission where women are inevitably more vulnerable (Islamic Republic of Iran, UNAIDS Country Progress Report, 2013). Further, the proportion of female drug users is not known; a recent study suggests that the older age of female drug users attending an MMT clinic is an indicator of low exposure to treatment (Dolan et al., 2012). Despite the dramatic increase in the coverage of NSPs among PWIDs, the figures are not high among WWIDs; this draws attention to the specific needs of female injectors. The factors affecting initial drug use (e.g., forced to engage by family members, male friends, or spouses) among women, affect their attendance in harm reduction programs; hence the critical need for programs designed for women (Islamic Republic of Iran, UNAIDS Country Progress Report, 2013). Moreover, as a comprehensive methodology, sexual and reproductive health education, including elements of PMTCT could be included in HR programs. In summary, two barriers need to be tackled in Iran in order to properly respond to the HIV epidemic among women and children, and these are also critical to the success of harm reduction approaches: Inadequacy of services to scale-up PMTCT interventions; and a rise in the new HIV diagnoses among women.

Morocco

In Morocco, HIV/AIDS prevalence in the general population remains as low as 0.14% but it is concentrated among key populations, including men who have sex with men (MSM) (5.12%), sex workers (1.98%) and PWID (10.17%) (Kingdom of Morocco, 2015). These populations account for 67% of new HIV infections (Mumtaz et al., 2013). Three integrated bio-behavioral surveys conducted between 2010 and 2013 in three Northern cities outline strong discrepancies in the burden of HIV and HCV among

PWIDs: HIV prevalence ranges from 0.4% in Tangiers and 3.7% in Tetouan to 25.1% in Nador; HCV prevalence is much higher with 41% in Tangiers, 45.4% in Tetouan and 90% in Nador (Kingdom of Morocco, UNAIDS and Global Fund unit, 2012 and 2014). During the last two decades, the number of drug injectors has been steadily increasing, particularly in the north of the country (Kingdom of Morocco, 2006, 2015). Increasing opiate use is associated with the geographical location of Morocco – adjacent to Europe – and to more affordable heroin. There is no reliable size estimation of PWIDs in Morocco. Official data from MOH are the main sources, and these estimates have ranged from 18,500 in 2006 to 3000–4000 in 2013 (Kingdom of Morocco, 2013). This problem also affects data regarding the prevalence of blood borne viruses among PWIDs, despite the fact that Morocco has one of the most developed surveillance system in MENA (Kouyoumjian et al., 2013). Prevention programs have reached around 1400 PWIDs and over 2500 non-injecting drug users in 2014 (Kingdom of Morocco, 2015). This problem also affects data regarding the prevalence of blood borne viruses among PWIDs, despite the fact that Morocco has one of the most developed surveillance system in MENA (Kouyoumjian et al., 2013). Prevention programs have reached around 1400 PWIDs and over 2500 non-injecting drug users in 2014 (Kingdom of Morocco, 2015).

According to data collected from samples of drug users in the Northern region, heroin is the most commonly used drug in association with cannabis, alcohol and benzodiazepines. The common route of administration for heroin is smoking—while there is no reliable estimate of the number of non-injecting drug users. On average, women account for 1 in 10 of PWID studied (Kingdom of Morocco, 2006, 2012a, 2014; Kouyoumjian et al., 2013; Maguet & Calderon, 2011).

The Moroccan 1974 Drug Act criminalizes single use of any controlled substance under the UN system and imposes a prison sentence for 2 months to 1 year as well as a fine of \$54 to \$540 for illegal drug use. However, the law also promotes rehabilitative measures of treatment and education as alternatives to punishment. Such alternatives are almost never imposed and remain largely unenforceable (Ounir, 2011). According to a survey among 300 drug users in northern Morocco, 82% have been incarcerated with an average number of 4.1 incarcerations. Among the inmates, 65% were convicted following a simple drug use offense (Maguet & Calderon, 2011).

Morocco was the second MENA country after Iran to implement a harm reduction strategy and introduced a first NSP in Tangiers in 2008 (Kingdom of Morocco, 2008). OST – in the form of methadone therapy – was offered for the first time in the same city two years later. Complementary harm reduction interventions were piloted, mainly in the northern region of the country. As a result of positive outcomes from the first national harm reduction strategic plan 2008–2011, the second national plan was issued in 2012 and aimed to expand harm reduction services (Kingdom of Morocco, 2012b). To date there are four NSPs and six OST centers that during 2014 provided 238,946 syringes (80 syringes per PWID per year) and enrolled 628 methadone patients (Kingdom of Morocco, 2015). PWIDs in Morocco have access to the other components of the UN comprehensive package of harm reduction services throughout existing harm reduction centers and routine HIV/AIDS facilities.

Civil society organizations have played a key role in promoting, implementing and disseminating harm reduction initiatives in Morocco. Two CSOs joined efforts to advocate for harm reduction. In the 1990s, an HIV/AIDS community based organization ALCS ('Association for the fight against AIDS') highlighted the fact that people using drugs were a population most at risk of HIV. In the 2000s, a group of psychiatrists located in Tangiers decided to adopt a harm reduction approach. They used a public mental health facility to set up a low threshold harm reduction program

(Hasnouna Centre); while integrating OST, the Hasnouna team created a harm reduction NGO (AHSUD, 'Association providing support to drug users') and set up a national harm reduction network ("RdR Maroc", French acronym that means "HR Morocco") to facilitate dissemination of information. At the same time ALCS implemented its first NSP in Tetouan in 2009 and promoted a human rights and public health based drug policy nationwide.

Since the mid-2000s, there has been a genuine syncretism between HIV advocates and mental health professionals who work in the addiction field. These organizations have collaborated with the MOH to pave the way for strategic plans and guidelines and became GFATM sub-recipients to implement harm reduction programs. The Global Fund, through an active country coordination mechanism, has played a consistent role in funding harm reduction activities in Morocco since it has been implemented. The private foundation DROSOS has been supporting this work while funding ALCS harm reduction program in Tetouan and the AHSUD training center in Tangiers. Thus NGOs have become opinion leaders and best practice prescribers. Political endorsement has come from government but also from the head of State – King Mohammed VI of Morocco has funded harm reduction buildings through Mohammed V Foundation.

To date, harm reduction activities carried out by NGOs include, distribution of injecting and inhalation kits, self-support groups, recreational activities, syphilis and HIV rapid testing, referring PWIDs who test positive for HIV to HIV care centers where ART is available, and referring opiate dependant individuals to methadone treatment centers. ALCS also has a mobile unit which provides out-of-hours services, targeting hard-to-reach drug users in Tetouan.

Despite six methadone centers and a national harm reduction scale-up plan, needs are still under-covered, especially for OST programs, which continue to have long waiting lists for entry. A set of critical constraints limit access to OST: geographical coverage (OST is still unavailable in areas with high numbers of PWIDs); prescription and delivery regulations for methadone (under the responsibility of a psychiatrist or physician specialized in addiction treatment and there are limited qualified personnel); lack of high dosage buprenorphine; and lack of effective OST facilities in prisons, although there is a joint project between Prison Administration and MOH to make OST available in prisons. These are some of the challenges Moroccan CSO have to address to make the scale up of harm reduction a reality. Barriers to overcome include, peer-based distribution of naloxone.

However, the most important barrier is the criminalization of drug users as harm reduction policies cannot achieve long-term success unless the legal environment is addressed. ALCS has been implementing a global advocacy campaign since 2011 with the support of the Open Society Foundation. The campaign has helped to establish a broad civil society alliance to raise public awareness and to encourage public debate on national drug policy. Two national workshops were organized in 2011 and 2014 within the framework of the National High Council for Human Rights. Key recommendations included the revision of the 1974 drug offense law and the guarantee of effective access to health and harm reduction services (Himmich, 2015). This advocacy campaign was associated with the scaling up of harm reduction and represents a bottom-up approach as CSOs continue to define the national agenda.

Path forward

In the eyes of many Westerners, MENA is one religion, one language and one culture: Islam, Arabic, and Arabs respectively. But Iran and Morocco provide a clear example that the region is

heterogeneous as these two countries are different. Not just with respect to the official languages, Farsi and Arabic, but also both have introduced and expanded harm reduction using different approaches. In so doing, they have provided evidence that harm reduction is feasible and acceptable in the MENA setting.

Regional stakeholders aiming to tackle HIV and HCV among PWIDs in their countries must interpret, for their own setting, the key lessons learned from both Iran and Morocco. In Iran, the top-down experience brought the religious and political leaders to the table at the time of initiating their harm reduction programs. In a conservative setting, Iran's religious and political leaders recognized that incarceration and abstinence-based treatment were not successful in reducing drug demand and ineffective in responding to HIV. Thus, they paved the way to introduce a new policy based on harm reduction. A 2005 judiciary committee order providing legal support to harm reduction interventions was a milestone of this model – especially explaining that harm reduction was not motivated by “malicious intent.” (Nassirimanesh et al., 2005.)

In Morocco the bottom up experience allowed civil society's commitment to harm reduction to flourish as a routine HIV intervention. HIV/AIDS community-based organizations and health professionals involved in drug treatment have combined efforts to devise the first harm reduction programs and to advocate for political endorsement and scale up. As human-rights based organizations, they have paid attention to the social and legal environment and the harassment and stigmatization of PWIDs. From the beginning, they were concerned with linking harm reduction to a change in national drug policy in order to offer a more effective HIV response that was compliant with universal human rights standards. The NGO led Rabat Declaration (2011), requesting a new Moroccan drug policy based on public health and human rights, was a milestone of this model (ALCS, 2011).

We may assume that a stable political regimen in both Islamic Republic of Iran and Kingdom of Morocco has played a role to ensure the development of harm reduction – a critical condition that is not fulfilled in most other countries of the region. This article has tried to outline supportive factors that have contributed to the rise of harm reduction approaches in these two countries, but it is difficult, even implausible, to shape a common model of intervention in the MENA region as the current state of harm reduction in Iran and Morocco is also a conjunction of specific – and probably irreproducible – settings. A broader commitment, of other MENA countries, to harm reduction should not only be considered as an effective intervention to mitigate HIV and HCV among PWIDs but it should be endorsed as a critical condition to reverse the current backward position of MENA in the global drug policy debate.

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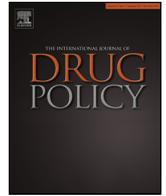
Conflict of interest

We declare no competing interests.

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Commentary

Hashish in Morocco and Lebanon: A comparative study[☆]Kenza Afsahi^{a,b,*}, Salem Darwich^{a,b}^a Clersé, Université Lille 1, Bâtiment SH2, 59 655 Villeneuve d'Ascq Cedex, France^b Faculty of Agronomy, The Lebanese University, Beirut, Lebanon

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ABSTRACT

Background: In the 1960s and the 1970s, Morocco and Lebanon became major producers of hashish for export to markets in West and Central Europe, Africa and the Middle East. By using a comparative approach, this paper aims to evaluate changes in production in the traditional areas of cannabis cultivation in the Rif (Morocco) and the Beqaa (Lebanon) and to better understand the role that these countries play in current trends in the global cultivation and consumption of cannabis.

Methods: The comparative approach takes in account the historical and institutional context, and the perception of cannabis in those two country. We rely on primary field research done in the Rif (from 2002) and in the Beqaa (from 1995) in the form of interviews and observations with farmers and intermediaries. Acreage and production estimates of hashish for both countries have been triangulated from different sources.

Results: Maghreb and Middle East have a long history of consumption, production and marketing of cannabis. Over the past 12 centuries, migration, trade and different spiritual practices and trends have led to the expansion of cannabis markets. This long period is marked by stages and rifts caused by foreign interference, a worldwide prohibition of cannabis at the beginning of the 20th century and increased global demand in the 1960s and the 1970s. Morocco and Lebanon are among the most important producers of hashish to be exported for trade for the last fifty years. The global prohibition of cannabis and the global sustained demand have created opportunities for poor farmers in the Rif and the Beqaa regions to survive and get wealthy. It is difficult to understand the reasons why areas producing cannabis are steadily increasing. If the Rif and the Beqaa share some features (such are marginalized areas of production, repressive legislation, huge international demand, range of comparable tasks and Mediterranean climate suitable for growing cannabis, etc.) then a comparison between the two countries makes it more easy to notice differences in contexts, in local and international markets (Stability in Morocco, instability in Lebanon; traditional market in Morocco, absence of local market in Lebanon, etc.) In Morocco, the stability and specialized skills among Moroccan growers of hashish have enhanced a competitive economy with various production areas, products and qualities, but also prices and strategies due to competition between Moroccan and European producers. Moreover, Morocco produces cannabis for its significant local market.

Conclusion: As shown by comparing Morocco and Lebanon, allows us to examine their perverse effects caused by a global prohibition. The criminalization of growers has only increased their marginalized situation. The enforced eradication of cannabis has limited the cultivation for a short time but not in any sustainable way (resumption of cannabis cultivation in a time of conflict in Lebanon; replacement of local variety by hybrids in Morocco). The cultural heritage of cannabis and its social functions should not be ignored. In the light of the new global changes in the cannabis cultivation (Import substitution, technical progress in developed countries, etc.), hashish producers in the south countries are likely to face uncertain future.

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Introduction

In the twentieth century, following increasing world-wide demand, Lebanon became a major producer of cannabis. In the 1960s, Morocco also began to produce hashish for export to the European market (Clarke, 1998). The strategic location of both countries – in the south of the Mediterranean, close to consumer markets in Europe, North Africa and the Middle East – has provided economic opportunity for poor farmers in marginalized areas, in the Rif in Morocco, and the Beqaa in Lebanon, and has allowed them to organize production and export of a drug at an affordable price.

The evolution of hashish in the Maghreb region and the Middle East has been influenced in a number of ways. For centuries, the spread of cannabis cultivation was affected by the mobility of goods and of people who transferred their knowledge and the techniques of cannabis cultivation and use. The Ottoman Empire and periods of colonization have also played a role in the development of production areas, which have either persisted or disappeared since independence. Morocco and Lebanon share certain cultural and religious similarities, but also similar socio-economic conditions in cannabis production areas. However, there are also differences in how crop growing areas have developed in the Rif and in the Beqaa. For example, unlike in Morocco where cannabis is a traditional and locally consumed crop, cannabis consumption in Lebanon remains marginal.

Using a comparative approach, and with the Rif in Morocco and the Beqaa in Lebanon as case studies, that takes in account the historical and institutional context, and the perception of cannabis in those two countries, this article aims to evaluate changes in production in these traditional areas of cannabis cultivation and to better understand the role that these countries play in current trends in the global cultivation and consumption of cannabis.

The article will trace the history of cannabis in the regions of Maghreb and Middle East, describe the specialization of hashish production (keeping in mind the socio-political context of each country) as well as the specifics of exported hashish. Finally, current production in Rif and Beqaa will be discussed, taking into consideration the global shifts in cannabis production, including improvements in production techniques and the increased competition from Europe.

We rely on primary field research done in the Rif (from 2002) and in the Beqaa (from 1995) in the form of interviews and observations with farmers and intermediaries. Acreage and production estimates of hashish for both countries have been triangulated from different sources. Figures on cannabis cultivation and eradication were obtained from the Ministries of Interior and Police departments. There is no census on acreage and cannabis production in Lebanon, however, estimates have been calculated and published in annual reports on Lebanese agricultural production by the Research Center for Agricultural Studies and the State Department (Bureau of International Narcotics Matters) have released figures on confiscated and seized drugs by authorities. In Morocco, some unofficial estimates appear in public articles prior to 2003. From 2003 and 2005 three formal investigations were undertaken by the UNODC (United Nations Office on Drugs and Crime) and the Government of Morocco (Kenza Afsahi participated in two of them). The producers' and intermediaries' names used in this paper remain fictional.

Cannabis and hashish in the Maghreb and Middle East: a brief history of circulation

The consumption, production and marketing of hashish are traditional practices in the Maghreb and Middle East regions. Over

the past 12 centuries, migration, trade and different spiritual practices and trends have led to the expansion of cannabis production in the region, and have influenced cultivation techniques and consumption. This long period is marked by stages and rifts caused by foreign interference and a worldwide prohibition of cannabis at the beginning of the 20th century.

In Arabic, the word “hashish” means “grass,” or “hay.” Today, in many countries, it refers to cannabis resin. “Hashish” is derived from the Arabic word *hasisa*, which is cannabis in its narcotic form, while the Arabs referred to the cannabis used for other purposes as *qannab*. However certain countries of the Maghreb and Middle East regions call the plant consumed for its narcotic effects “hashish,” as is the case with *haschicha* in Egypt. In Lebanon, both the plant and the resin are referred to as hashish, *haschichi* or *haschichi el keif* (Bouquet, 1950). In Morocco, a distinction is made between the cannabis plant, *kif*, and cannabis resin, “hashish.” The word *kif* was apparently borrowed from the Egyptians, who referred to the dreamy state caused by cannabis as *kayf* (Sonnini, 1799). Hashish also goes by other names including *zatla* in Algeria and *chira* in Morocco.

From the 9th to the 16th century, non-psychoactive cannabis played a significant role in the Muslim world, where it was used for manufacturing paper, textiles and rope. It also held an important place in medicine (Hijazi, 1984). Different sources indicate the presence of cannabis cultivation during that period in Fez, Morocco; Kabylia, the Constantine region; northern Tunisia; south of Cairo; Homs and Damascus in Syria, etc. (Afsahi, 2009; Bellakhdar, 2013; Makhlof, 2000).

The use of cannabis for ritual and recreational purposes evolved in a secondary manner. The ritual use of cannabis was widespread in mystical circles in Maghreb and Middle East regions, and while Sufis incorporated it into their religious practices (*Dikr*; mystical vigils) (Mouna, 2009; Afsahi & Mouna, 2014), its popularity spread throughout the region. The popularity of cannabis consumption for recreational purposes grew over time, through migrations, pilgrimages to Mecca (Magne, 1948), and spiritual exchanges and trading between the North African port cities (Clément, 2007). The main narcotic cannabis-producing areas, mainly producing hashish and cannabis herb and hashish for local consumption, were in Egypt, Turkey, Syria, Lebanon, Algeria, Tunisia and Morocco (Afsahi, 2009; Bellakhdar, 2013; Bouquet, 1951; Clarke, 1998; Makhlof, 1994, 2000).

Hashish has taken various forms before evolving into its current resin. It is said to have been ingested for centuries in the Maghreb and Middle East either alone or with food and drink before smoking the drug became popular with the appearance of tobacco in the 16th century. Prior to the 10th century, an intoxicating concoction, much like the *bhāng* (India preparation made from cannabis leaves and flowering tops cooked in water, milk or other liquids), was prepared by coral fishermen in Algeria (Bellakhdar, 2013). Al Baytar (no date, translation between 1877 and 1883), Andalusian botanist from the 13th century, writes about different methods of processing *hasisa* in Egypt in the publication *Jami' al-mufradat al-aghdiya wa al-adwiya*. These methods consisted of boiling the leaves, kneading them into a paste and making tablets, or roasting dried leaves, crushing them with one's hands, mixing them with sesame seeds and sugar, and then slowly chewing the final product.

Hashish rapidly gained popularity in the region when people began to smoke it, thus prompting the development of hashish processing methods. Resin extraction is not a difficult process but methods advanced as production and the need to store and conserve the product increased. Hand-rubbing techniques, developed in India and Nepal in the 14th and 15th centuries, evolved into the sieving method (extracting hashish from dry cannabis by rubbing it on a fine to medium mesh screen), and this was adopted

in Afghanistan in the 17th century, and in Lebanon, where sieving and threshing expanded before being imported by Morocco in the 20th century (Afsahi, 2009; Clarke, 1998; Darwich, 2003).

Morocco has a long history of cultivation and consumption of *kif*. The *kif* is a mix of tobacco and dried, chopped cannabis, smoked in a pipe called a *sebti*. In the 15th century in Morocco, the increasing recreational use of cannabis led to the cultivation of the plant on a small scale in many private gardens and orchards. Cultivation, however, was not limited to the northern region; indications of growing activities have been found in oases in the southern region of the country. It was not until the 18th century that the Ketama and Beni Khaled tribes in the heart of the Rif Mountains were recognized as major *kif* producers (Afsahi & Mouna, 2014).

In Lebanon, unlike elsewhere in the region, cannabis consumption was not a traditional practice, and opinions differ as to the exact date of its introduction into the area. Some believe that cannabis cultivation in the Beqaa valley began around 1860 (Moussaoui, 1985; Nahas & Peters, 1979), while Makhoulouf (1994) states that it was introduced in Lebanon in the most remote northeast regions of the Beqaa valley by the Turks during the Ottoman era (1516–1918)^{1,2}. Others claim that Zahliot traders returning from India introduced seeds to their own Zahlé region, before moving their growing activities to the Beqaa valley to avoid paying taxes during the French mandate (Baalbaky & El Khalil, 1992; Yaghi, 1983).

The 19th century marked a decisive turning point for worldwide cannabis production. During the colonization of Egypt and Algeria, botanist (Lamarck) and psychiatrist (Moreau de Tours) rediscovered the plant's medicinal and psychotropic properties. However, because the quality of European cannabis was not comparable to that produced in African and the Middle East, hashish produced in Maghreb and Middle East regions became popular in Europe (Afsahi, 2009; Richard & Senon, 2002). Interest in cannabis for medicinal use decreased sharply at the end of the 19th century, as the chemical industry turned its attention to hypodermic techniques (Richard & Senon, 2002).

In 1899, the French government created in Morocco “La Régie des Tabacs et du *Kif*”, a French funded multinational company located in Tangier, based on the model of the Indochinese Régie of Opium, a monopoly aiming to control opium import and marketing in Asian colonies. In 1906, at the Algeiras Conference, France obtained a monopoly on the Régie and enhanced cannabis cultivation over the Central Atlas (Marrakech), the Gharb (Kenitra) and the Western Rif mountains (Afsahi, 2009). This is why, during the first half of the 20th century, Morocco possessed significant stocks of cannabis plants for production of *kif* to the local population and did not produce Hashish. The revenue from the monopoly on *kif* and tobacco trade went to the French Administration (Bisiou, 1994).

From 1912 to 1956, the Central Rif zone was under Spanish protectorate, during which time the Spanish tolerated cultivation as a mean of winning over the infamous rebel Berber tribes (Afsahi, 2009). The *kif* cultivated in this area escaped the control of the French and Spanish. It was smuggled across country borders and became the most popular product with the *kif* smokers.

¹ During much of the Ottoman Empire, from the end of the 13th century to the beginning of the 20th century, the consumption of hashish was accepted and commonplace among Sufis and the working classes in the Maghreb and Middle East regions. Hashish was less popular in Turkey than in the Arab provinces of the Ottoman Empire, such as Syria and Egypt (Inglis, 1975). The Turkish ruling classes adopted the habits of the Greek and Armenian minorities, drinking alcohol and wine, while the less fortunate had to make do with hashish. Cultivation was encouraged by Turkish officials, as it was in the Beqaa valley and in Algeria (Nahas & Peters, 1979; Bellakhdar, 2013).

² A technique used with water-soluble alkaloids found in morphine and cocaine; cannabis oil does not contain alkaloids (Richard & Senon, 2002).

In the 1920s, the prohibition of the use, cultivation and trade of cannabis extended to a number of European countries, such as Greece, as well as Turkey and Egypt, where traditional consumption represented one of the largest consumer markets in the world. Egypt sourced its supply of hashish from Greece and Turkey and, to a lesser extent, purchased *charas* from India (Bouquet, 1951). During the Ottoman occupation and until 1920, the Beqaa was annexed to Greater Syria in the province of Damascus. It was marginalized and its people poor, in contrast to the regions of Smaller Lebanon, which was populated by nobility and wealthy merchants. At the time, the Greater Syria was producing hashish in the Baalbek-Hermel region, currently part of Lebanon.

At the beginning of the French mandate in Lebanon, the French questioned the role played by the tribes – mostly Shiites – in collection of land rent whose proceeds remained in the hands of the occupying authorities during the ottoman period. The clan chieftainship considered cannabis cultivation as a source of power and wealth. Cannabis cultivation spread to the most remote areas of northwest Beqaa, which at the time was site for revolutionary movements against the French protectorate that prohibited cannabis cultivation in this region. From that point on, cannabis cultivation had a new territorial dimension and a strong link was created with the tribes (Darwich, 2003). Lebanese hashish gradually gained popularity and Egypt became one of Lebanon's most reliable customers. Similarly, in the 1930s, Lebanese hashish was readily available to hashish users in Morocco (Bowles, 1985 in Afsahi, 2009).

In the 1960s and 1970s, global cannabis production increased, particularly in developing countries as worldwide demand grew, prompted by the hippie counterculture. European and American consumers, who had no history of cannabis cultivation, turned to the existing markets: Africa, Asia, the Middle East and the Caribbean (Decorte, Potter, & Bouchard, 2011). Countries in the Maghreb and the Middle East, where production was prohibited, also pushed demand upward towards Morocco and Lebanon. The Rif and the Beqaa regions thus began to specialize in the production of hashish for the international market. Historically, the State tolerated cannabis cultivation in these regions, which were marginalized and less developed and thus the large-scale production of hashish offered economic compensation, as well as political and cultural benefit (Afsahi, 2009; Afsahi & Mouna, 2014; Moussaoui, 1985).

Rif and Beqaa regions specialized in hashish production for export

In Morocco and Lebanon, farmers became expert in hashish production for export to international markets. Yet, cannabis production and distribution acquired a new dimension due to increasing global demand in the sixties. We highlight here the specialized skills in hashish production in both countries, the abilities of farmers and traffickers to adapt to various institutional contexts and finally the products brought onto the market.

Specialized skills in hashish production

It is essential to emphasize the importance of the cannabis plant in the life of the farmer in the Rif and the Beqaa regions and more generally in the lives of farmers in Morocco and Lebanon. Farmers in the Rif considered cannabis to be a historically important product but also culturally pertinent for its religious, social and therapeutic functions (Afsahi & Mouna, 2014). It is also a symbol of identity, mostly of Berber origin. The Berbers have had a tumultuous history with the Central government of Morocco (Rif war 1921–1926, riots of 1958 and 1981) and have been deprived of development projects, following the independence of

Morocco in 1956. This has linked together more closely cannabis cultivation and underdevelopment.

Numerous factors after independence promoted the development of cannabis cultivation. First, the local Rif inhabitants, whose main source of revenue came from forestry, suffered from the appropriation of the forest industry by the State. Unemployment in the Rif region soared as a result of economic and political instability in Algeria, where many people had once found seasonal work planting and harvesting. In addition, higher prices triggered by currency unification after independence, and the absence of development projects to improve living conditions, gave people little choice but to emigrate to Europe, or participate in illegal activities, such as growing cannabis (Afsahi, 2009). The practice of processing *kif* into hashish began in the Rif region with conserving, stocking and transporting operations to the international market. Subsequently hashish use spread to other Moroccan regions and slowly replaced *kif*. This way, cannabis was considered for Ketama and Ben Khaled people as an identity symbol and a way for a poor population to survive.

In Lebanon, cannabis became a symbol of resistance to Shi'a clans in the Beqaa (Darwich, 1997) during the French mandate and after independence (1943) when economic activities focused on the capital and other big cities and neglected the region. Like in the Rif, the Beqaa was denied development and management projects, and thus cannabis production was encouraged by extending cultivation (Afsahi, 2009; Darwich, 2001). However, unlike in the Rif and in Morocco more generally, farmers in the Beqaa and in Lebanon did not claim the traditional use of cannabis, rather its wider cultivation encouraged greater use among Lebanese people, mainly military and young students of all social and religious ranks. This was particularly marked during the civil war, where cannabis was used as a stress reliever.

Expertise in cannabis cultivation to produce *kif* in Morocco allowed people to develop skills in processing cannabis into hashish. This expertise was introduced by exogenous actors: American and European travelers on their visit to Ketama region in the 1960s with *Hippie Hashish trail* (Clarke, 1998). Through such exchanges, hippies presumably showed farmers methods to process the *herbal cannabis* (called also *kif*) into hashish, notably using the "sieving" method they had learned while travelling in Lebanon and Afghanistan. But according to the older generation of farmers, Algerian intermediaries had been coming to Ketama since 1965 in search of new sources of cannabis. Hashish was marketed and likely produced in Algeria until the French left the country and it was banned by the new government (Afsahi, 2009; Clarke, 1998). Aslama Chai Chai, a native of Ketama, recounts that, although westerners and local inhabitants were already producing hashish, it was Mustafa, an Algerian, who first began producing it on an industrial scale. He had learned to make hashish in Lebanon, and then harvested it in Ketama for 10–12 years, exporting hashish to Algeria (Clarke, 1998). Algeria, a large consumer of *kif* and hashish, became one of Morocco's biggest customers.

Ketamas and Beni Khaled people were providing cannabis to other regions in Morocco for *kif* and *maajoun* use (*maajoun* is a sweet mixture made with cannabis and honey and spices. The recipe differs by region). Later, they started growing cannabis to provide hashish first to European markets, then later to Moroccan markets. At first, tasks were divided – farmers managed the processing of cannabis into hashish. Then cannabis producers sold it on because the processing stage, which is the most risky, could only be conducted by skilled specialists. However, over time, most farmers avoided intermediaries and poor cannabis herbs prices that had decreased with increased acreage and production (In the last fifteen years, prices have fluctuated between 20 and 30 dirhams in bad years to 100 dirhams in good years). Since then, the

division of labor has decreased among farmers and those processing cannabis into derivative product.

Hashish production was expanded in the Rif in the 1960s and 1970s. Hashish production involved specialized skills so all fertile lands and irrigation techniques were dedicated to cannabis cultivation. Before that time, cannabis was sold like other agricultural and forest products and did not represent the only income source. It was not until the 1980s that farmers began to increase crops to meet growing demand from Europe. Cannabis cultivation was becoming more widespread with new areas cultivated as and when opportunities arose. The area under cultivation likely reached 10,000 ha by the end of the 1970s, 25,000 ha by the mid-1980s and, after expanding to the Larache provinces to the west and Al Hoceima to the east, 60,000 ha in 1993 and 75,000 in 1995 (Afsahi, 2009; Anegay, 2001). Conflicts in Afghanistan (1979–1989) and Lebanon (occupation of the Beqaa by Syria) affected production in these countries and contributed to increased production in Morocco. Morocco (a larger country than Lebanon, 710 850 km² in Morocco and 10 452 km² in Lebanon, and closer to Europe) became the largest hashish producer and exporter to the European market. Moroccan and European drug trafficking networks grew stronger and Spain became the main gateway for Moroccan hashish entering Europe (as well as the main location for seizures). The extended areas and increased numbers of people expert in hashish production transformed the labor economy in the region, where tasks were performed by whole families including by women and children as well as labor from all Morocco regions.

We have little information about how expertise was acquired in Lebanese hashish production. However in the 1960s Lebanon was already producing hashish. As noted, Turkish people may have introduced expertise and skills in the Beqaa region. In Lebanon, the labor force in cannabis cultivation was largely familial, conducted by small and mid-level agricultural business, while in big business, salaried employees were involved (Baalbaky & El Khalil, 1992).

Institutional context of cultivation areas in the Rif and the Beqaa

In the Rif and the Beqaa, areas characterized by economic marginalization, isolation and under development, producing hashish for export was a consequence of poor revenues earned for traditional cultivation, which failed to provide for even basic needs. In contrast, hashish production generated revenue far exceeding expectation, allowing farmers to get rich. This access to illegal activity can be explained by a lack of basic infrastructure (roads, education, health, training), or employment alternatives, a fragmentation of lands, inadequate growth of agricultural businesses, a lack of funds and marketing, and a weak development of irrigated agriculture.

However, cultivation areas exist in various socio-political contexts. Despite the troubled period in the Rif, Morocco is a stable country with no war and a state authority that extends across the territory. On the other hand, the flourishing cannabis production in the Beqaa valley was operating in an unstable political and multi-confessional context (Christian group in Zahleh and Baalbeck Hermel, Shi'a group in Baalbeck, Sunna group in Ouest Beqaa and Druze group in Rachaya) with foreign interferences that erodes Lebanese's sovereignty (Bennafla, 2006). Therefore cannabis economy defined by sectarian division, depending on activity (Muslims Shi'a work in agriculture, and Maronite Christians in marketing). The bordering countries (Turkey, Syria, Israel/Palestine, etc.) also played an important role in trafficking. Moreover, the Beqaa represented a privileged area in Syria, inhabited by people in high positions in politics and in the military (1975–2005) (presence of Syrian troops, dams, Syrian president's portraits, etc.) but also by the presence of a large number of Syrian workers with low qualifications, who were

underpaid and working in construction or agriculture. Their presence in Lebanon caused conflict with the local population (Bennafla, 2006) but met the demand for a labor force for illegal farming.

Hashish production in Lebanon has fluctuated over the years, changing pace in response to political unrest and economic conditions. Once limited to some 40 villages in remote northern regions of the Beqaa, cultivation spread after the civil war broke out in 1975. It appeared in new regions, even in the southern end of the Beqaa valley, amid the prevailing anarchy. In 1981, the area under cannabis cultivation reached 30,000 ha, mainly in the Beqaa plain (Saadé, 1982). Nasrallah (1984) makes reference to 70,000 ha in 1978, while in other years the area under cannabis cultivation varied from 30,000 ha to 40,000 ha. Based on an average area of 40,000 ha, revenue from cannabis cultivation was an estimated 2 billion Lebanese pounds, or the equivalent of the State budget at the time. Cannabis crops represented roughly 27% of agricultural land. By the beginning of the 1980s, Lebanon was the largest hashish producer in the Middle East (Moussaoui, 1985). From 1975 to 1985, during the Lebanese civil war, the cannabis trade was at its peak. While Shia Muslims were the principal cannabis farmers in the heart of the Beqaa valley, most hashish trading was run by Christian families who controlled the ports of Beirut and Jounieh.

At the beginning of the 1980s, amid political instability, new networks developed in Shia regions. Trafficking spread to other port cities in both northern and southern Lebanon. In the northern regions, trafficking flourished with the presence of the Syrian army. The drug trade was also lucrative for Israelis, who were involved in networks between Lebanon and Egypt that developed at the beginning of the 1967 Six-Day War (Clarke, 1998). In the mid-1980s, Lebanon ranked third among cannabis-producing countries (Darwich, 2001) but by the end of the decade, with the declining global price of hashish, the closure of Egypt to drug traffickers, the civil war and the invasion of Lebanon by the Israeli army, the cultivation of opium poppy replaced cannabis farming for the most part, mainly on the oriental side of Mount Lebanon (Bennafla, 2006; Makhoulouf, 2000) and in Beqaa and Hermel area (Bennafla, 2006). Reintroducing a poppy cultivation was a response to Turkish traffickers under Syrian supervision. After poppy eradication in Turkey, traffickers came to Lebanon looking for fertile areas. Farmers acquired expertise in opium poppy farming and processing opium into heroin, which was more labor intensive and complex (high needs in phytosanitary products, water and workers, a very sensible operation to extract opium). Chemists and clandestine laboratories were sought in the Beqaa to process basic morphine into heroin. However, in wartime, traffickers were encouraging farmers to grow opium poppy as more a profitable crop than cannabis. This is another significant difference between Lebanon and Morocco where opium poppy was never grown: The war-time conditions in Lebanon made much easier the introduction and expansion of poppy-growing.

The difference between Morocco and Lebanon is also evident in the extent of state interference. In Morocco, cannabis cultivation was tolerated, a situation evident since the nineteenth century when Sultan Moulay Hassan allowed cannabis cultivation in five *douars* (villages) of original tribes and later with the Spanish who allowed it in order to win the sympathy of Berber tribes. After independence cannabis cultivation persisted in the Rif, where its population remained impenetrable to any substitution project (Afsahi, 2009). Today, eradication takes place mainly in new growing areas.

As for Lebanon, repression against cannabis cultivation increased in peace-time. During periods of conflict, the cultivated areas were mainly in inaccessible areas, out of the control of authorities (Darwich, 1997). At the end of the civil war, from 1991 to 1994, Lebanese authorities, under pressure from the international community and backed by the Syrian army, launched

a campaign to eradicate cannabis and poppy crops in the Beqaa valley and to implement measures for rural development (Darwich, 2003; Makhoulouf, 2000). The Beqaa had already experienced eradication campaigns and since 1966, public authorities have produced a project to replace cannabis crops with sunflower by providing seeds and phytosanitary products and encouraging good prices, causing a large decrease in cannabis production. However, in 1971, the government were unable to continue these provisions due to administrative and bureaucratic problems, encouraging a return to cannabis production (Darwich, 2001; Tohmé, 1989).

The Ketama Gold and Red Lebanon decades

Cannabis sativa L. is originally from Central Asia or Northern South Asia (Bellakhdar, 2013; Clarke & Merlin, 2013). Four sub-species of cannabis are recognized: *Cannabis sativa*, *Cannabis indica*, *Cannabis ruderalis* and *Cannabis afghanica*, although there are many sub-varieties. Scientists disagree on the number of species and varieties of cannabis. In addition, in the cannabis industry there is a lumping together of cannabis into two broad types: indica and sativa. This classification is often validated by observable plant characteristics. This taxonomy is not science-based and does not recognize the correlation between physiological response and plant appearance.

In their book, *Cannabis: Evolution and Ethnobotany*, Clarke and Merlin (2013) denounced this lumping under one single name (cannabis) and give the widely accepted distinction between sativa and indica. We will not get into this debate here. Instead, we will try to understand how the different actors analyse their local environmental conditions and the quality of the cannabis and hashish they produce and trade. However it should be noted that the sativa cannabis is generally not smoked because it contains only a small content of THC. It is cultivated for its seeds and mainly for its fibre for producing textiles and ropes. The varieties that are currently available in Morocco and Lebanon are sub-species of cannabis indica and are mainly cultivated for their psychoactive THC. It is also important to take into consideration that the cannabis is a polymorphic specie, it means that it adapts to the environment where it is cultivated. In warm areas, the cannabis produces a large amount of resin and a small amount of fibers but in more tempered regions it is the other way around: more fibers and less resin (Bellakhdar, 2013).

Cannabis plant is annual (which means one crop per year followed by a new planting the next year with the seeds from the previous crop). For centuries, farmers have grown by selecting and replanting seeds from the plants that were the most productive of their yield or the ones that satisfied some cultural interest. But when they increased production to export hashish, built on market consumption, they began to plant all seeds, and the quality of commercially available cannabis fell (Clarke & Merlin, 2013).

Cannabis crop requires natural exterior climatic conditions (water, fertile land, light conditions, sufficient nutrients). Thus, in the Rif and Beqaa regions, most cannabis crops grow near sources of water to limit irrigation cost. Morocco and Lebanon benefit from the region's Mediterranean climate: hot, dry days and humid nights, with no rain during the cannabis plant's flowering and fruiting season (Bouquet, 1950). The growing regions in both countries are quite high in altitude, a condition beneficial to resin production (Safi, 1935). The Beqaa is a high plain, with its lowest altitude at 900 m, and its highest point slightly above 3000 m. The highest peak in the Rif mountain range is 2400 m. Both regions have a tradition of cannabis cultivation and expertise that has allowed them to adapt their agricultural practices to the qualities of the hashish they wish to market.

In Morocco, although a rain-fed cannabis crops, *baali*, also have a reputation for producing higher quality hashish (Afsahi, 2009) so

irrigating fields for large-scale hashish production has gradually become more widespread. Unlike the Lebanese, Moroccan farmers use intensive farming practices. As a result of large-scale hashish production for export, local *kif* underwent selective breeding, yielding a variety of resinous cannabis similar to Lebanese varieties and *hindu kuch*, with wide leaves, short growth periods and high resin yields (Clarke, 1998, 2004). In the 1970s, intermediaries reportedly introduced seeds into Morocco from the Middle East, notably from Lebanon (Bellakhdar, 2008), in order to increase the yield per hectare, as well as the tetrahydrocannabinol (THC) content. The area under cannabis cultivation expanded, thanks to the modernization of irrigation systems, newly dug wells and the acquisition of pumps. The need for a labor force (women, agricultural workers, etc.) to implement phytosanitary measures (chemical fertilizers and pesticides) grew. Thus, large-scale hashish production favoured quantity at the expense of quality. However, Morocco has always produced very high-quality products in the Ketama growing region. The same holds true for the Beni Ahmed region of the Chefchaouen province, renowned for its exceptionally fertile land (Afsahi, 2009; Afsahi, 2013).

Unlike in Morocco, the quality of Lebanese hashish is the result of extensive farming practices. Cultivators use little insecticide, very few use fertilizer, and only half irrigate their fields. Some use organic fertilizer consisting of chicken manure. Farmers we met believe that the harvest must take place on September 14, the day of the Feast of the Exaltation of the Cross (Christian religious feast) and the day the cannabis reaches maturity, producing the finest quality of hashish. Although irrigation and fertilization increase yields, cannabis grown without irrigation or fertilizer is much sought-after for the quality of its hashish, and sells at a higher price. Very few cultivators invest in irrigation pumps, and digging wells is simply not done. However, more and more, the current trend is to increase yields through irrigation when cultivators are close to a free source of water. Irrigation makes for more work in the fields, especially thinning (separating the male from the female plants), whereas otherwise labor would be used for the single task of weeding (Darwich, 2008).

For the processing stage both countries use sifting and threshing techniques. The threshing technique, called *nfid* in Morocco, means “to sieve,” and in Lebanon, it is referred to as *daa*, which means “to hit/strike.” The quality of the powder (or pollen) varies, depending on how vigorously the cannabis is threshed. The use of fine mesh screens for sieving results in less plant matter and a better quality product. Cultivators improved on these techniques by inventing a pressing device – the *pressa* in Morocco, and the *maqtaf* apparatus in Lebanon, which sieves the product more quickly. These new methods produced greater quantities in a shorter time period, and the resulting product retained its quality for longer during storage than the hashish made from fresh (non-dried) cannabis. They also produced a product that was easier to transport and export.

Whether in Lebanon or Morocco, the sieving method produces hashish of three or four different qualities. In Lebanon, first quality hashish is called *zahra el haschich* (or *zahret el Kolch*), which signifies a brown hashish flower; while second quality hashish, *zahret el Assa* (flowering stem) or *kabcha* (no translation), is light brown. People in the Middle East do not bother with the third and fourth qualities: *telte* and *rabaa*, often called *zayt* (oil). They are greenish-yellow or green, and have a crumbly texture (Bouquet, 1950).

In Morocco, several qualities of powder are extracted: the “special” powder is the first to fall through the sieve before threshing, simply by rubbing with the hand (approximately 1% of the total plant weight, and kept for local consumption) and it is the finest and purest powder. Threshing follows, to obtain first quality hashish, called *tbsla*, which is produced in small quantities and

sold for a higher price on the Moroccan market to foreigners in the country, and to a limited external foreign network. In the historic area of culture, a farmer met in a village which introduced hybrids for three years in 2013, says that a few people grow the hashish *tbsla* because it needs a large quantity of dried cannabis to produce a very little quantity of hashish. According to him, growers do not want to put at risk their crop if the quality of the product is bad (Afsahi, 2013). What remains of the plant yields second quality hashish, and then third quality, called *résina* or *hartouka*, which contains the most plant matter. These last two qualities are mainly exported for trade on the European market.

On the international market, products names are different from the native glossary. We do not know under what circumstances product names are ascribed. It could be by traffickers for marketing reasons or by consumers to show their appreciation of the products. Nonetheless, Moroccan and Lebanese cultivators rarely use the same glossary to name their products.

From 1960 to 1980, Lebanese hashish was also recognized in Europe for its superior quality.

The term Red Lebanon (Red Lebanon or Red Leb), does not exist in Lebanon, it is probably used because of the brown color of the first two qualities of this hashish. Red Lebanon, earned a reputation worldwide, in particular during the 1960s and 1970s, and many young Europeans travelled to the Beqaa in search of the product. The first two qualities of hashish may have been dubbed *Red Lebanon* because of its brownish colour. *Yellow Lebanon*, or *Blonde* or *Golden Leb*, is also mentioned in several written works, in particular the reference book *Hashish!* by Robert C. Clarke, but it does not appear to correspond to any Lebanese or Middle Eastern concept. *Yellow Lebanon* may refer to the last two qualities obtained through sieving. Other European users on Internet chat forums differentiate *Red* and *Yellow Lebanon* through the drying method. The cannabis plants used for *Red Lebanon* were apparently left to dry on the stalks before cutting, which is what gives the reddish colour at the end of the flowering stage, while *Yellow Lebanon* is obtained from cannabis plants harvested earlier and dried using the traditional method. It seems that these designations are the exogenous nicknames and may have been given by intermediaries or European consumers attempting to develop a brand name. While very little Lebanese hashish has been exported to Europe since the 1990s, according to farmers and mediators we have met, it remains a product of choice in Syria, Egypt, the Gulf countries, Saudi Arabia and even Israel.

As early as the 1970s, intermediaries designated the product *Made in Morocco* as a mark of quality, gaining recognition on the European market. *Double Zero* hashish, or the famous *Ketama Gold* competed on the European market, along with other recognized qualities, including *Red Leb*, *Turkish Grey*, Asian hashish from Afghanistan and Nepal, as well as the mythic *Shitral*, stamped with a golden seal (Afsahi, 2015). The emergence of a new social class, the *beznassa* (Mouna, 2011), thanks to the presence of Rif migrants in Europe, especially in the Netherlands, contributed to the international reputation of the quality of hashish from the Ketama region being sold at Dutch coffee shops (Afsahi, 2015).

Current trends

Current hashish production in Morocco and Lebanon

In 2003, the first of three surveys carried out by the UNODC in cooperation with the Moroccan authorities reported cannabis plants covering 134,000 ha, with an estimated production of 3080 tons of hashish. In 2005, the third survey reported 72,500 ha of cannabis in the Rif, with an estimated production of 1066 tons of hashish (Afsahi, 2009; UNODC, 2003). In less than a decade,

Morocco's cannabis cultivation fell from an estimated high of 134,000 ha in 2003, to 47,500 ha in 2011, or a 65% decrease (Chouvy & Afsahi, 2014; UNODC, 2003, 2013).

However, it appears that Moroccan hashish production decreased very little in the past decade, even though the cultivated areas have well diminished. A survey conducted by Chouvy and Afsahi in 2013 reveals that the plants growing on most of the parcels of land inspected in 2013 were hybrid strains with various characteristics (deep green, large-leaved, more branching developed, etc.), which are different from the original appearance of the *kif* (light green, fireweed, less branching developed, etc.). One of these hybrids has an average resin yield of 5% over three years. This yield is by far superior to that of the *kif* plants inspected by the UNODC in the mid-2000s, with resin yields of 2.8% in 2004, and only 2% in 2005 (yield estimation methods reviewed by the UNODC) (Chouvy & Afsahi, 2014).

In Lebanon, in 2001, the areas under cannabis cultivation increased significantly, coinciding with the termination of the United Nations integrated rural development program in the Baalbek-Hermel region and the September 11 attacks. In 2001, cannabis cultivation was estimated at 2450 ha, with an average raw cannabis (green hashish) production of approximately 26,000 tons (Darwich, 2008). At the time, some 9500 families earned a living farming cannabis. That year, the fall harvest took place with no interference from government authorities, who were too busy fighting terrorism. In 2004 and 2005, the area given over to cannabis cultivation was estimated at 3275 ha and 6150 ha respectively (both irrigated and non-irrigated) (Darwich, 2008), but almost all of these crops were then destroyed in eradication campaigns, and production was negligible (In 2004, 87% of the cultivated areas were destroyed, and in 2005, that number reached 97% based on data provided by the Lebanese security services). Estimated production was 2062.5 tons, and 625 tons for the two years in question (Darwich, 2008). Subsequently, the Lebanese press mentioned the presence of cannabis cultivation in the Beqaa valley, notably following the assassination of President Hariri and the 2006 Lebanon War.

Today there are virtually no official sources in Lebanon. Although the area under cannabis cultivation in the Beqaa valley is not known, it is believed to have increased significantly in past years, as producers take advantage of political instability in the region. Mohamad, a major producer in Hermel mentioned that in 2014 and 2015, cannabis cultivation was mostly limited to the Baalbeck and Hermel districts, with very little being produced in the Akkar district. Moreover, Mohamad added that in 2014 (the driest year in many decades, with a very small harvest due to little irrigation), the price was higher: 1 *hokka* (1 *hokka* = 1.2 kg) of non-irrigated hashish sold at \$2000 USD. In Egypt, 1 *hokka* can easily fetch \$6000 USD in good years (Darwich, 2015).

One of the former producers growing cannabis since 1980 in Deir El Ahmar village, specifies that the expected crop production in 2015 was very high. He personally estimates that the cultivated areas of 20,000 ha or more, and some 20,000 families involved in the business. Although the crops are not threatened by eradication campaigns, selling the product will prove difficult, and the price is low, around \$300 USD for one *hokka*. A sixty year old known and leading intermediary in Baalbeck, and due to his long experience assured that the war in Syria has closed the drug routes to Jordan and Turkey and the major production is sent to Saudi Arabia, Egypt and East European countries (Darwich, 2015). The unpredictable political situation has made drug trafficking an increasingly risky business: trade networks are unreliable, border areas are questionable, and intermediaries are often forced to find new contacts. Farmers could opt to store the product (it keeps for four to five years) while waiting for new market opportunities and a higher selling price.

Toward a new generation of hashish?

Toward the end of the 20th century, cannabis cultivation expanded in Europe, the Americas and Oceania. Import substitution was implemented in almost all of the so-called developed countries (Decorte & Potter, 2015; Decorte et al., 2011). Some countries may have become self-sufficient, thanks to domestic cultivation (Jansen, 2002). Increased cannabis cultivation in industrialized countries has gone hand in hand with a shift in consumer preference for products with higher levels of THC (Bello, Toufik, Gandihon, & Evrard, 2005; Ben Lakhdar & Weinberger, 2011; Korf, Benschop, & Wouters, 2007).

This new cannabis market was fuelled by technical progress, information sharing, the sale of seeds via the Internet and boutiques catering to those wishing to cultivate indoors (Ben Lakhdar & Weinberger, 2011; Decorte et al., 2011; Jansen, 2002). The development of the cannabis herb market was helped by more relaxed laws in Europe, Canada and the United States in regard to consumers and home cultivators, as well as the sale of seeds, which is legal in numerous countries, including Spain, the Netherlands and France (although it remains illegal in the United States, except in states which have recently legalized cannabis).

In Europe, hashish sales suffered from competition from cannabis herb, losing much of its popularity thanks to modern developed marketing tactics employed by new, local cannabis entrepreneurs (Jansen, 2002). Although one may have expected a decline in hashish production in Morocco following the increasing crops of cannabis in Europe, new developments in Moroccan cannabis cultivation were under way. The use of the *Pakistani* hybrid dates back to the mid-2000s (Afsahi, 2009); it is presumably the first hybrid strain (hybrid is a result of crossing between different species) introduced and cultivated commercially in Morocco, starting in 2004. Since then, a dozen or so hybrid varieties have been produced in the Rif, and their names reflect their foreign origins, for example, *gaouriya* ("European," in Moroccan slang) and *romiya* (literally, the "Roman" or foreigner). The strain referred to as "Pakastani" is called *pakistana* and there is also mention of the *jamaicana*, the *mexicana*, the *cannabis*, the *avocat* (avocado) and the *hajala* (the widow: a feminized variety). In 2013, the most widespread variety was called *khardala*, or literally, the "mix" or "blend" (Afsahi, 2009; Chouvy & Afsahi, 2014). Mostapha, a farmer who consumes, tells us that he does not smoke hashish made from hybrids because it is more potent and produce stronger psychotropic effects than traditional Moroccan hashish. This corresponds to the current preferences of European consumers. He produces parallel hashish from the *kif* variety for its own consumption (Afsahi, 2013).

In the past decade, seizures of Moroccan hashish in Europe have revealed changes in processing, as well as increased THC levels. *Savonnettes*, or 250-g soap bars (the most common shape in the 1980s and 1990s), are disappearing and being replaced by 200-g balls, 100-g tablets and 10-g olive-shaped pellets. The different shapes indicate product qualities and prices. In general, "olives" currently represent the best quality on the market (Chouvy & Afsahi, 2014). But the fact that Moroccan hashish production has been subject to certain changes has been noted mainly through the significant increase in THC levels of cannabis resins seized in the past few years in the European Union, in particular in France. Sample analyses of seizures in France showed that THC levels averaged 8% in the 1980s and 1990s, and rose to 10% in 2007, 12% in 2011, 16% in 2012 and more than 17% in 2013 (with an all-time high of 39% in one sample in France) (Chouvy & Afsahi, 2014).

It has taken time for industrialized countries to develop an interest in extracting resin domestically, hashish being the main product imported. However, together with the indoor cultivation, an efficient method of separating the resin has been developed (UNODC, 2009). We are currently seeing an increase in

hashish-producing activity in Europe and North America. Many websites sell equipment for separating the resin. At the same time, we have observed the spread of textbooks and tutorials guiding the new producers (Afsahi, 2017). Modern hashish extraction methods are being developed locally, including the popular *Ice- O- Lator* method to produce so called “ice hash” or “bubblehash”, which uses ice and water to extract hashish with help from a resin extraction apparatus. Another generation of hashish, *skuff*, obtained with a pollen extractor, *Pollinator*, has higher levels of THC. The *Pollinator* is comparable “to a tumble-dryer with a finely woven insert placed in a box, lined with plastic” (UNODC, 2009: 18). “During rotation of the pollinator, the THC-bearing parts of the leaves and flowering tops break and pass through the net” (UNODC, 2009: 18). *Skuff* is produced in Europe, with the Netherlands reportedly the world’s largest producer. In the United States, resin extracted using butane gas to obtain cannabis oil free of impurities (*butane hashish oil*) and THC levels as high as 70% (Chouvy, 2015) spread quickly throughout the international cannabis community.

According to available data, hybrids were not introduced in Lebanon. The case of three young men of the same family is a typical example; children of former cannabis growers, illustrate that cannabis cultivation is considered as a tradition and pass from one generation to the next without transgression. These current farmers want to preserve their original seeds with the aim of maintaining quality and standards that meet their expectations. In reality, the demand for specific quality Lebanese hashish is still high in the Middle East, and the demand for hybrid products is non-existent (Darwich, 2015). In Morocco, some producers do not agree with hybrids and other new growing techniques (According to them, there is an abusive use of fertilizers, pesticides and water; products with very high THC levels). They prefer to keep the original variety of *kif*, but are obliged to follow the market trends (Afsahi, 2013). The quantities produced in Lebanon are easily sold on the market but Moroccan producers have recently experienced difficulties in selling their stocks.

Conclusion

Morocco and Lebanon are among the most important producers of hashish to be exported for trade for the last fifty years. The global prohibition of cannabis and the global sustained demand have created opportunities for poor farmers in the Rif and the Beqaa regions to survive and get wealthy. It is difficult to understand the reasons why areas producing cannabis are steadily increasing. If the Rif and the Beqaa share some features (such as marginalized areas of production, repressive legislation, huge international demand, range of comparable tasks and Mediterranean climate suitable for growing cannabis, etc.) then a comparison between the two countries makes it more easy to notice differences in contexts, in local and international markets (Stability in Morocco, instability in Lebanon; traditional market in Morocco, absence of local market in Lebanon, etc.) In Morocco, the stability and specialized skills among Moroccan growers of hashish have enhanced a competitive economy with various production areas, products and qualities, but also prices and strategies due to competition between Moroccan and European producers. Moreover, Morocco produces cannabis for its significant local market.

In Lebanon, political instability, wars and foreign interference did not prevent farmers and intermediaries from improving cannabis economy. On the contrary, the absence of any government control in the Beqaa during conflict seems suitable for growers and intermediaries and has even fostered the processing of cannabis into poppy crops in the 1980s. The current political disorder in the Middle East, especially the war in Syria, has encouraged a return to the cannabis crop and hashish production in the Beqaa valley (Servel & Zurayk, 2014). Today, Lebanon is

likely to be the most significant producer of cannabis resin in the Middle East.

Lebanon has always been a producer of cannabis for export. It is obvious that local consumption is less than in Morocco; that a long history of cultivation has not stimulated local use in this country. Now, less production is noticeable in Lebanon and it has fewer opportunities in European markets compared to Morocco; currently it is rare to find Lebanese hashish in Europe. Although mentioned in European seizures (EMCDDA, 2012), it is difficult for European consumers to find it on the market, and little is known about hashish trade networks between Lebanon and Europe. On cannabis forums, consumers speak of how difficult it is to find. In Dutch coffee shops, Lebanese hashish, renowned for its superior quality, is seemingly impossible to find.

Farmers have developed processes and techniques to grow hashish depending on the natural resources and on the consumer market. They adapt to the demand by using wide ranges of products (Morocco) or maintaining the high quality (Lebanon). For more than a decade, global cannabis cultivation has experienced significant troubles that have influenced the use of hashish: the development of the indoor cultivation of cannabis and the hybrids, the amendment of legislation regarding cannabis in many American states and in other countries. In Morocco, farmers have complained that they are unable to sell their stocks as before due to European competition in cannabis cultivation. Moroccan hashish is still widely available in Europe and its potency has increased significantly over the past 10 years, thanks to a shift from *kif* to hybrids. This kind of hashish is the most commonly mentioned in seizures in Europe and North Africa (EMCDDA, 2012, 2013). Moreover, the intermediaries in the Rif are seeking other markets and have moved towards West Africa (Afsahi, 2015).

However, it is unlikely to find in Lebanon any incentive to grow hybrids and farmers benefit from a captive market without significant risks of competition: the Beqaa valley seems to be a favorable area to grow cannabis; crop growers are experts in growing and processing techniques. They manage their marketing network and are able to adjust to unstable institutional contexts; cannabis is hardly cultivated in the closed bordering countries. Thus, in Egypt, where prohibition is enforced, fertile land will not be used for cannabis cultivation in the near future. Egyptian consumers, who are very fond of hashish, have not developed know-how in modern cannabis-growing methods and, for religious reasons, seem reluctant to join the trade. Nevertheless, there is again too much to learn about hashish production in many other countries in the Middle East which will compete with the Lebanese hashish and disturb its flow. Turkey for instance maintains a traditional hashish production and in view of its ideal geographic location at the crossroads of Europe, the Balkan countries and the Middle East, cannabis cultivation has dramatically increased in recent years, mainly in Diyarbakir region (Akgul & Yilmaz, 2015).

As shown by comparing Morocco and Lebanon, prohibition seemed to be ineffective and did not limit production. The criminalization of growers has only increased their marginalized situation. In the early 1990s, this resulted from international pressure in Lebanon (following an interior security restoration and a national reconciliation, Lebanese government has taken a firm decision to eradicate illicit drug crops) and in the early 2000s in Morocco (following the first official enquiry on cannabis elaborated by ONUDC and Moroccan government). The enforced eradication of cannabis has limited the cultivation for a short time but not in any sustainable way (resumption of cannabis cultivation in a time of conflict in Lebanon; replacement of local variety by hybrids in Morocco).

The historical background of cannabis cultivation in these two regions allows us to examine their perverse effects caused by a global prohibition of cannabis. Growers and traffickers are

prompted to find other opportunities in other places, which moves the problem elsewhere; this is what happened between Algeria, Tunisia and Morocco. The cultivation has decreased (in Lebanon over the 1990s and in Morocco) but has never been limited sustainably and soon intermediaries have found alternatives by introducing the hybrids (Morocco).

The cultural heritage of cannabis and its social functions should not be ignored. Morocco shows a deep-rooted attachment to cannabis; it has positive social value and a long tradition of use. The international cooperation policies, by providing funding to the two countries to develop replacement crops did not succeed in controlling cannabis cultivation. The failure to enforce replacement crops may be due to many reasons. Cannabis cultivation has shifted the production system, some growers have invested in second houses or businesses, have become wealthy and acquired a new standard of life, converting to another activity requires capital but it seems inefficient to encourage cannabis growers to shift to another activity without finding markets for their new products. The land and the small cultivated surfaces represent additional obstacles impeding the development of agriculture. Moreover, cannabis produces an annual harvest whereas other products may take three to four years to bear fruit (such as fruit trees), a long period during which a previous cannabis grower would be unable to support himself. There are also climate constraints as the Spring frost may pose a risk for some delicate plants.

Finally, in the case of Morocco, cannabis production has increased since the introduction of hybrids (greedy of chemical fertilizers and water) creating pressure on water and soil resources and creating social tensions due to the scarcity of these important resources. There could also be reason to fear that global upheavals in cannabis cultivation could have an impact on the region by pushing cannabis growers to produce more harmful and illegal crops, as in Lebanon where poppy was cultivated in time of trouble. In the light of the new global changes, hashish producers in the south countries are likely to face uncertain future.

Conflict of interest statement

The authors declare no competing interests.

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