

Drug Trafficking in Afghanistan: Any Alternative Solution?

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Abstract

In the contemporary history of Afghanistan, opium cultivation brought revenues to the people. Yet, the cultivation and drug trafficking has been associated with terrorism in recent days. The fact that many insurgency groups yield incomes from the trafficking is undeniable. Moreover, not only does it become domestic issues, but it also gains concerns in the regional level. This paper explains its development in the context of Afghanistan and the alternative solution. In this case, this study proposes Saffron as a substitution to opium that the government could consider to take.

Keywords: *opium, drug trafficking, terrorism, Afghanistan, Saffron*

Introduction

While the phenomenon of drugs is a major social problem that exists in almost all societies in the world, opium Poppy¹ cultivation in Afghanistan also has a long history. This is particularly after the introduction of European poppy by Arab traders along the Silk Road. Since 1100 A.D, opium has been cultivated in Afghanistan. The opium cultivation and trafficking were widely practiced in Afghanistan during the reign of King Habibullah Khan in early 1900s and was usually exported to Iran. Although the use of opium has been as illegal as alcohol in Afghanistan, it is still cultivated in large quantities (Werb, Kerr, Montaner, & Wood, 2008).

Opium production in Afghanistan has grown in Afghanistan since the end of the 1970 following the loss of direct government control of production as well as increased indirect world market demand.² This happened because of regional political shifts particularly in Afghan's neighbors. During the time of the new Iranian political regime, Iran government imposed stricter rules and penalties for controlling drug trafficking and drug use that reduced the opium trade in the country. Subsequently in the late 1990s, restrictions on cultivation and processing of opium were also implemented by Pakistan. As a result, these activities shifted to Afghanistan.

¹ Opium Poppy or Papaver Somniferum is some kind of plant cultivated to produce a pain reliever commonly used in medication system. See Mishra et al. (2013).

² The demand was due to Vietnam and Laos political divisions at the time which were formerly Europe's and North America's main drug suppliers. See McDonald et al. (2011).

In addition, opium production increased during the Mujahedin government and continued during Afghan civil wars. Thus, since the 1990s, Afghanistan had accounted for most of the world's opium production. Afghanistan became the world's supplier of opium and heroin surpassing Burma at the moment. With the emergence of the Taliban government, Afghanistan became more established in the world's opium market (International Crisis Group, 2001). Because of the harsh economic conditions faced by Taliban and continued international sanctions, opium cultivation and production had grown substantially.

In this case, many have studied the opium cultivation associated with terrorism in Afghanistan. The drugs and insurgency groups have become a nexus (Shanty, 2011). According to a study by Piazza (2012) the more opium cultivation in provinces in Afghanistan, the more terrorism act and casualties in that areas. This has become problematic even if the government desires to ban it. Mansfield (2016) maintains that government's prohibition on opium cultivation by force along with distribution of economic incentive is ineffective. Instead, it needs negotiation and consolidation with elites, stakeholders, and interested groups in national and regional levels. Hence, Afghan's drug has become a regional concern. Its trafficking has created and led into security problem in countries surrounding Afghanistan (Bleuer, 2012; De Danieli, 2014; Halbach, 2013). Yet, the existing literature is still lack of explanation on the alternative incentive of opium cultivation that leads insecurity problem in society.

Study aims at explaining the opium and drugs trafficking in the context of Afghanistan. This paper especially seeks the explanation not only on its relation with insurgency groups, but also its negative effects to society and the possible solution. The organization of this paper is as follows. After this introduction, I review some existing studies on the topic. Subsequently, the methods employed would be mentioned and followed by the explanation of drug development in the country. As a part of the core grounds, the next part would be the discussion on the possible alternative of the complex problem of drug cultivation in Afghanistan. In this case, I elaborate Saffron as a conceivable substitute that can reduce the opium while give economic hope for the society. Last but not least, a concluding discussion would be provided at the end.

Methods

This study was done by employing qualitative methods in analyzing cases of drug trafficking in Afghanistan. In the process, this qualitative research uses two data collection techniques. First, primary data collection techniques through the interview method with several sources. This study benefits from the fact that the author is a staff

in government so that they have sufficient access to information. This in-depth interview was conducted using open-ended questions and semi-structured interviews.

Second, the technique of collecting secondary data through reviewing literature studies and documentation such as reports from government and non-government agencies. Besides, scientific journals, scientific books and online newspapers also provides important information. This aims to strengthen the arguments built in this paper.

Opium and Insurgency Groups

Nowadays, opium as one kind of drugs constitutes a security issues due to many reasons. In the case of Afghanistan, it provides a huge income for terrorist groups, particularly Taliban. The drugs also become social problems since the society is threatened and insecure because the addicted users tend to commit crimes to afford the drugs. Additionally, the drug trafficking come from Afghanistan to neighboring countries. It destroys the people's health mentality and could strengthen the mafias in the countries.

When Taliban was in power, they had incomes from opium as they coped with difficult economic conditions and international sanctions. When their power was defeated, they still exist and have turned into an insurgent group. After 2005, the Taliban continued to strong again, financed their revolt, encouraged a large number of people to produce opium, and even punished those who rejected it. In addition, other major smugglers paid the Taliban money to secure safe routes. At the end, the Taliban earned this money to buy weapons and food as well as pay their fighters. Nowadays, most of the Taliban's budget comes from opium production in Afghanistan. They often attack on security forces to secure opium factories and trafficking routes. According to General John Nicholson, about 60% of Taliban and other terrorist group's income come from the drug trafficking (Rowlatt, 2019).

From all related factors to drug, according to a BBC report, it is estimated that Taliban's annual income is around \$100 to \$400 million (Azami, 2018). Meanwhile, based on the Ministry of Counter Narcotics in 2017, Taliban and other terrorist groups earned about 116-184 million US\$ tax from the opium production (The Economic Times, 2018). They have income from different stages of the opium process. Taliban receive 10 percent of the tax they set illegally on opium cultivation from farmers. Besides, Taliban also collect taxes from laboratories which convert opium to heroin and taxes from drug smuggler and traders (Azami, 2018).

It is sometimes seen that the way the war in Afghanistan has changed to more economic revenues. The increase in opium production indicates that insurgents in Afghanistan have shifted from a war of ideology to a war of profits. Taliban may regard themselves as Muslims and genuine defenders of Islamic values to create an Islamic state. Yet, Islam actually prohibit the production and use of drugs, which means that they cannot represent any kind of Muslim. The US Peace Institute survey shows more than 80% of Taliban commanders fight for profit rather than ideology (Gretchen, 2009).

Taliban is directly involved in cultivating and producing opium in insecure areas forcing some farmer to their favors. To achieve their goals, the majority of illiterate people in remote villages of the country have been influenced by terrorist groups. They are told that opium cultivation is permitted in the religion and that it will be used by other Western and non-Muslim nations. On the contrary, according to a UN report, Afghanistan has the highest numbers of drug addicts reaching to about three million (CBS News, 2017).

Drug cultivation is not only a global concern, but the Afghan community is also greatly affected by this ugly phenomenon. As three million Afghans have become drug addicts (Ministry of Counter Narcotic, 2015), they are having profound impacts on health problems, social, cultural, economic and even psychosocial conditions that, in turn, increase crimes (Kemp, 2010). Moreover, some of them are those who moved to Iran and Pakistan during the civil war and Taliban era and became addicted to drugs there. Thus, when they came back to Afghanistan, they create problems in the society (Hadid & Ghani, 2019). Most of the drug addicts in Afghanistan have been expelled from their families because the community and their families consider them as vagrants. To survive their life, they do all forms of crime in order to access the drugs. They also commit robbery, theft, and even murder.

Figure 1 How Afghan opium poppy farming has grown

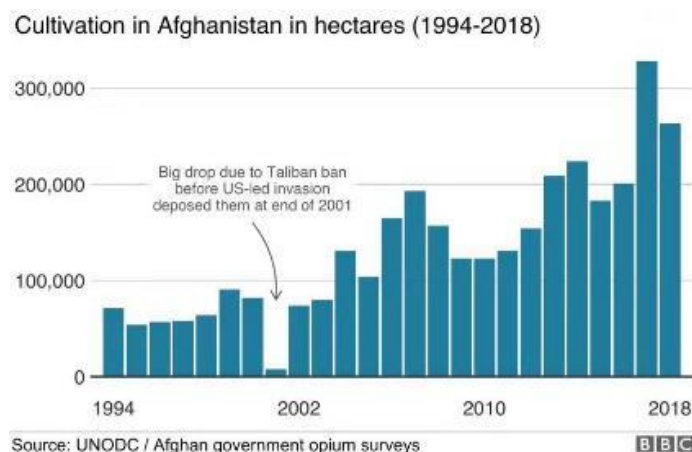
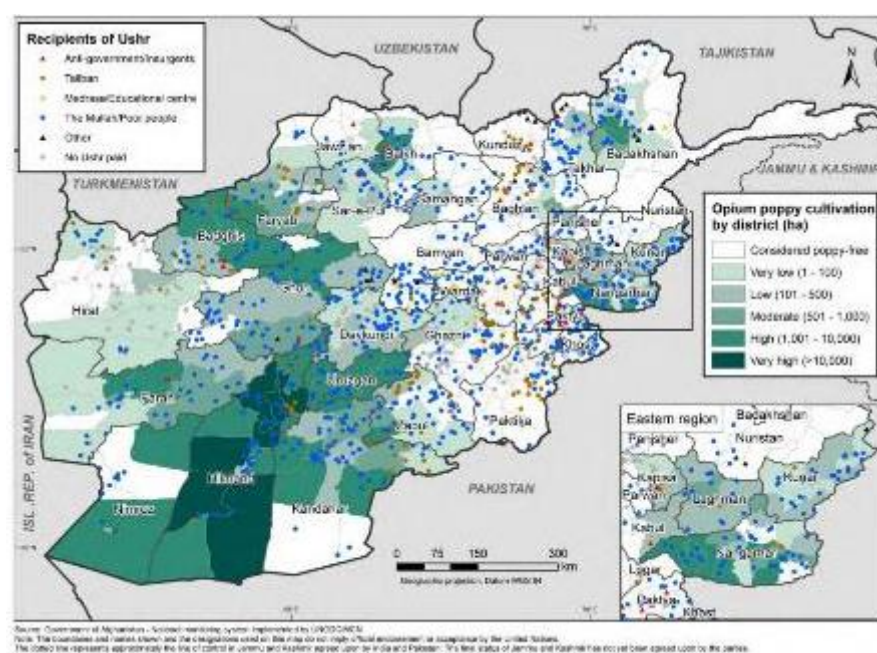


Figure 2 Payments of Ushr (Tax) and Its Recipients in Sampled Villages According to Village Headmen, 2018

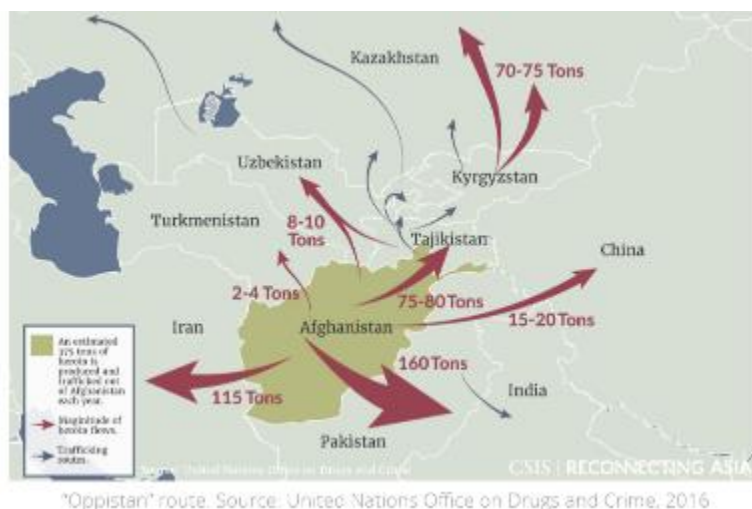


Geographically, the poppy cultivation is mostly in restive areas in southern and southwestern of Afghanistan along the Pakistan border. These are Zabul, Nimroze, Helmand, Kandahar, Uruzgan and Farah province accounted almost 98 percent of Afghan opium (UNODC, 2008). In 2016, a large number of farmers increased the poppy cultivation which represents about a 43 percent increase in poppy cultivation compared to 2015. As a result, the amount of opium production has reached 4,800 tons (UNODC, 2016).

The value of Afghanistan's opium was about 4.1 to 6.6 billion in 2017 or about 20 to 32 per cent of GDP. Moreover, in 2018 an estimated 328,000 hectares of opium has been planted, accounted about 63 percent increase compared to 2016 (UNODC, 2018). Currently, Afghanistan produces about 90 percent of the world's opium production. At the same time, Afghanistan supplies about 95 percent of Europe's opium (Rubenstein, n.d.).

The substantial growth of opium in Afghanistan has posed many challenges and has raised concerns among neighboring. This is because it increases instability and becomes a good source of supply for insurgents. The problem related to drugs in Afghanistan could be due to the lack of government control. Opium cultivation is growing since the instability occurs in some out of control regions. Strengthening the government control is in the need.

Figure 3 Heroin Flows from Afghanistan



Any threat that may arise in region would bring concerns to the closest distance or neighboring countries. All of Afghanistan's neighboring countries are affected as consumers or as transit countries for drug trafficking from Afghanistan. The figure above gives the picture of how many tons of drugs have been smuggled from Afghanistan into its neighbors (esri, 2019).

Legalizing to Reduce Drug Cultivation? Saffron as an Alternative

Drugs in Afghanistan might be directly linked to the insecurity, stability, and durability of the war. While it is also danger for the society, it has become the main financial resources for terrorism and insurgency in the country. It is also issued that drugs have links to corruptions and abuse of power in the country. Thus, reducing the drug cultivation might be one of the best solutions.

Yet, since it is difficult to do so, the government should consider some new approach. Among the various crops produced in the agricultural sector, opium is one of two commodities that are of exceptional economic value. The second similar commodity that is also known as a unique crop in Afghanistan is Saffron. Afghanistan is the world's largest opium producer and exporter but is also one of the producers of Saffron. Whereas, Afghan Saffron has its extraordinary value known as red gold that differs from other kinds of Saffron. Hence, there are two issues that could be considerate: first, an issue of drug cultivation's legalization in an attempt to reduce and control it; second, promoting Saffron as a replacement and alternative commodity.

First, an agenda to legalize the drug or poppy cultivation has been raised in an attempt to control the drug not to be illegally trafficked. The idea of legalizing drugs

cultivation has been proposed by some practitioners. In a commemoration of World Drug Day, Afghan Public Health Minister called for the legalization of drugs. He maintained that the legalization could reduce easy access to drugs as the government control it. The government also can monitor the number of drug addicts in Afghanistan and could prevent drug trafficking. Similar ideas have also been mentioned by Helmand Governor. he has ever requested the central government to control poppy cultivation by issuing permits. He added that the regulation should be limited only for medical propose (Bowman, 2016). It is natural in Afghanistan that every new project faces challenges. Yet, it must start somewhere to fight this phenomenon. Correspondingly in 2008, international drug policy center Senlis Council had also offer licenses for opium cultivation for medical purposes. It is argued that the regulation could benefit to Afghan government (Grare, 2008).

The idea of legalizing the drug might be related to considerations that controlling the drug is in need due to its dangerous effects. As mentioned earlier, drugs have caused a large number of addicted people, making this substance venomous as worst as wars in Afghan society. Since its large quantities are being illegally trafficked to other countries in the world, drugs have been contributing to the worst of insecurity image of Afghanistan. In turn, it gains concerns from Afghanistan's neighbors as well as the international community. The large-scale drug production in Afghanistan has caused some problems. In social realm, illegal drug production leads to addicted people. It increases crime in the society and, in turn, lead to the worse image of the society at national and international level. Moreover, it has also created security problem. As frequently mentioned, one of the major problems created by the illicit drug production is that it becomes an important source of revenue for the Taliban and other insurgent groups.

This has exacerbated insecurity in the deprived Afghanistan and challenged the development projects. Countries or foreign companies who want to invest in Afghanistan worry that they will lose their investment due to insecurity. They also fear from drugs smuggle if they directly connect to Afghanistan. Both factors originate from the illicit drug production in Afghanistan.

There have been many efforts taken against the drug cultivation and trafficking by Afghan government and some international organizations. Nevertheless, so far, there is no significant outcome to eradicate this phenomenon in the country. As the Afghan government has tried various ways to reduce drug or poppy cultivation in the country, the problem still appears to be the biggest challenge for the country's development programs. Millions of dollars have been spent by the international community to help in combating Afghan drugs. Even, while an independent ministry called the Ministry of Narcotics has been made, a department called the Department

of Narcotics within the Ministry of Internal Affairs has also been established to eliminate this phenomenon.

The fall of Taliban government followed by the formation of a new government backed by international community could be a key time to eradicate these phenomena from Afghanistan. Yet, the money and forces invested and devoted to eliminate drugs have not been effective. They use the force to destroy the cultivation lands. Since they implement the use of force to destroy poppy fields, they create insecurity issue, particularly in the Southern Afghanistan.

It is important that in order to save humanity from this poisonous substance, not only Afghan government, but also all nations and trans-regional players are needed to be united in the fight against this phenomenon. They need to change their approach and implement different attitude and policy to counter narcotics. Using force might be less effective and, hence, it needs a new approach. It is to address the problem to make economic projects realized smoothly without any insecurity issues. The fight against narcotics is not just about attacking the cultivation lands and productivity fields. Rather, it is a fundamental solution rooted in, if not controlled by, the government. Some policy and regulation should be significantly addressed. This is to consider that the existing policy has not been successful in the last decades.

Since the government has rights to regulate the use of land, they shall have ability to control it. Legalizing drug cultivation does not mean that trade and consumption is also legal except required by law. While drugs have some negative effects, it also is needed for medication. It can be used to relieve pain that is common some surgery related issues. The problem here is that the control to the use of drugs itself should not be abused. Hence, how this scenario could reduce and eliminate the drugs in the country will be demonstrated as follows.

Temporarily in the beginning, licensing opium could reduce the amount of illegal opium trade. It would only be purchased by the government for medical purposes. Therefore, step-by-step the government could promote a culture regularity and rule of law while the cultivation will continue to reduce. Subsequently, significant reduction in illicit opium can cut off financial sources for Taliban. Without drug resources, it seems that insurgent groups will not be able to continue their movement to such a large extent.

Meanwhile, the government's economic capacity would be increased by taxes from the licensed cultivation. Only medical companies that will use this for medical purposes. When the law enforcement for the drug authorities is implemented, the farmers will have certain purpose to sell to the government. The decreased number of illegal drugs will provide a good image of Afghanistan at international level. As a

result, international community will improve their relationship with Afghanistan. Threats that are geopolitically posed in the region will be reduced.

Legalization would create jobs for people in the field of horticulture as well as in factory as it turns the drugs into medicine. Because the majority of illegal acts are caused by the effect of unemployment among society, it will become legitimate for job creation. People who sought help to preserve illegal opium cultivation areas from the Taliban will be reduced. Although the trafficking could still continue, its decrease will follow as the government monitors and controls it.

Indeed, this proposal may create a lot of disapproval among the people and the international community. Yet it can be one of the feasible solutions to tackle this global problem since, so far, no effective solution has been found. This proposal is not about a permanent legalization scheme, it is intended to prevent illegal cultivation and trafficking in a long term but limited period.

Unfortunately, legalizing the drugs is currently still challenging in Afghanistan due to the lack of government control. Since some parts of Afghanistan's territory are under control of insurgent and terrorist groups, the lands are uncontrollable. The Afghan government cannot really meet the standards that the international community demands to legalize drug cultivation. Thus, this scenario is still very difficult to implement in the current situation in Afghanistan.

Hence, the other problem about the drug trafficking is related to the government inability to control the land. Legally, and of course ideally, a state has a full right to regulate and control its territory or land. The insurgency and terrorist groups bring difficulties to Kabul to make it right. In the meantime, the country has been facing such problem for many decades. Thus, controlling the land whether to legalize the drug cultivation or banned it seems unlikely. If the government gain a full control over the land, every policy would be easy to implement. In other words, the legalization needs government ability to control the land. Moreover, if the government does not get the right solution, the scenario of legalizing the cultivation could be considered to help a policy maker in the future that there is another way to combat this phenomenon. Indeed, it depends on the government management, political will, and cooperation with international donors and other international anti-drug organization.

Most developed countries import most of the medical morphine from Australia, India, and Turkey (Bowman, 2016). Some believe this may be a good idea for Afghanistan. Hence, to legalize drugs is to boost its economies and prevent millions of money from becoming a source of rebel groups. It is believed that legalizing narcotics in an appropriate framework can not only be effective in combating drug

trafficking. It is also one of the most important campaigns against terrorist, insurgent and other individuals and entities involved that have been using drugs as their incomes. If a government wants to overcome unwanted non-state actors in a country, the first appropriate action is to cut off their resources and complementary paths. It has been proven in the case of Afghanistan that drugs are one of the main sources of insurgent groups. In the meantime, it has also been proven that over the past two decades, military pressure has no positive result. Considering these explanations, this new proposal might make more sense.

The international community has been making great efforts in combating narcotics in Afghanistan over the past two decades. It could provide a better option to fight against the insecurity issues in Afghanistan. Implementation of this new proposal - the legalization of drugs in Afghanistan by the government - would be impossible without the help from international community or organizations. Indeed, the legalization of drugs must be regulated within a specific framework and conditions. The purpose is not to trade but, instead, to restrict the drugs over time. It is to gain controls over its cultivated areas. Thus, this could be one of the friendliest and favorable approaches to eliminate drugs in Afghanistan.

Yet, in addition to the above-mentioned scenario, licensing drug production could also cause the following problems. This kind of regulation could make social envy for those who never use their land for drug cultivation. When a comprehensive legalization plan is implemented in a region that the cultivation already existed, the other people in other regions might get interested. In other words, it may create a multi-nose feeling among farmers. If some areas are not equally regulated by the government, Taliban or such terrorist groups could offer them to sell and the unexpected circumstances remain existing.

Thus, it depends on how the government could implement it appropriately. Every possible policy has its own pros and cons. Moreover, the implementation should also be supported by the concerned parties, including international community and organizations. The main idea to this extent is that, any kind of action that can make Afghanistan's economy self-sufficient will open a door for the stability of the country. In turn, all the surrounding countries in the region will also benefit as there will be no security threat. Legalizing drug cultivation might be considered carefully in the purpose of developing the country. A complementary attempt should also be taken to cope with the risks.

Hence, the *second* option that could be effective in the fight against drugs is replacing opium with other alternative cultivation. In this case, Saffron, also known as red gold, is one of the best examples. As one of the most valuable spices in the world, it is widely cultivated in Iran, India, Greece and Turkey, and has been used to

treat many diseases such as Anxiety, Cramps, enlarged Liver and Fever.³ In Afghanistan, an approximate of 7.000-10.000 hectares in across 32 provinces are suitable land for saffron cultivation (Katawazy, 2013). According to a report in 2019 by the International Taste and Quality Institute, Afghan Saffron ranked the first in the world in term of quality with the production reached to 18.2 metric tons (Xinhua, 2019).

Figure 4 Afghan Safron



Saffron might be as valuable as poppy. Yet, poppy cultivation is neither the interest of the government nor in the interests of the farmers since all the profits go to drugs mafia and terrorist groups. Moreover, the drugs cause the young generation of the country to become addicted. Afghan farmers gradually consider to replace narcotics plants with Saffron since in recent years there has been the implementation program to ban poppy cultivation. Currently, it has given positive results in the western province of Afghanistan, particularly Herat Province. Saffron gives good incomes for farmers as it is one of the world's most expensive spices.

Afghan Saffron has been exported to France, Spain, Italy, the United States, the United Arab Emirates, Saudi Arabia and China. Its lucrative exports to Europe and rest of the world have led many farmers to cultivate Saffron instead of poppy. Widespread production and export of Afghan Saffron is undoubtedly important in world markets. But because of the lack of a standard brand of Afghan Saffron, there may be almost no name in the world markets.

Saffron production system and its growing season are different from other plants. Afghanistan's climate is very conducive to this cultivation. It is also very important to select the seeds that are most economically viable. Cheap labors as well as favorable land and weather conditions in the country have made Afghan Saffron high quality. Some consideration could be seen in the table below. That could be positively the alternative cultivation to poppy. Since agriculture is the basis of the

³ Due to its multiuse and high quality, Saffron could worth US\$1.000 - 5.000 per kg. See Saffronice (2019).

Afghan economy, special attention should be paid to it as one of the key pillars of development.

Figure 5 Quick facts on Why Saffron for Afghanistan (Katawazy, 2013)

1	Low water requirement	1 or 2 irrigations usually suffice in Afghanistan
2	Labour Intensive	250 person days per year
3	Simple Machinery	All activities are possible by hand manually
4	Easy Transportation	Compared to other crop product saffron is not bulky
5	Higher Income	At least 5000\$ USD income per year
6	International Market	Demand Increases year by year
7	Short Growing Season	One month labour required per year
8	Suitable Water Requirement	During saffron growing season other crops do not need water
9	7 Years production	Land preparation can cultivation labour requirements only in the first year
10	Low Risk	Drought resistance no specific saffron diseases
11	Gender	80% of activities can be carried out by women
12	Good Storage Abilities	Up to 2 years after drying
13	High Productivity	Afghanistan soil and climate are very suitable

So far, this replacement is also profoundly supported by the government. Afghan Ministry of Agriculture has been spreading efforts to promote Saffron cultivation among provincial farmers. Eventually, it increases the annual production of Saffron to several thousands of kilograms. To maintain and improve its production and quality, some circumstances that should be considered are: developing plans to reduce Saffron production costs; compiling a comprehensive improvement plan for Saffron production and performance; supporting Saffron exports; developing a sales plan for quality products with different packaging in the target markets; establishing management of the purchase and export of Saffron produced by neighboring countries; preventing smuggling of manufactured products abroad. Furthermore, the importance of Saffron as a viable alternative to opium in Afghanistan should undergo extensive reforms. This may include providing vocational training for farmers on how to grow Saffron. While the quality would be improved, it could increase its international market demand. To this extent, the Government - including the Ministry of Agriculture, the Ministry of Counter Narcotics, the Afghan Chamber of Commerce - and national as well as international institutions should strongly support the cultivation and production of Saffron in the country.

Conclusion

This paper undermines the opium cultivation and drug trafficking in Afghanistan that have correlation with terrorism. The trafficking has become a serious security issue domestically and, to some degree, regionally. Many attempts may have been done but its complexity remains. To eliminate opium and replace it with other commodity, it is necessary to have effective solutions. In this case, legalization of poppy cultivation might be a solution. Yet, the cultivation of Saffron as a substitute

commodity for poppy can be a better option to help the sustainable economic growth of the country. Saffron is one of the few valuable crops with a small amount but high material value. This is precisely what Afghan farmers need to replace poppy. If farmers have the necessary infrastructure, they will be able to earn a good income from Saffron cultivation. Gradually, Saffron could become suitable production and export commodity that would boost its economy.

As the drug is danger for the life of society and associated with terrorism, tackling this issue is uneasy. Hence, replacing drug cultivation might be an acceptable policy. Saffron that has a good economic value could be an alternative. Moreover, if Afghanistan is able to integrate into the world market, Saffron could become a valuable commodity. Its extraordinary worth could contribute to Afghanistan economic income when the global markets are accessed. Subsequently, Afghan Saffron would become the country's brand that meet international standards and promote its unique. When Afghanistan could receive incomes from this kind of plant, the country could also obtain its positive image from the world. Yet, the problem faced by the country is related to the terrorist groups who control some areas. Such policy and expectation can be made only if the Kabul government could have a full control over its territory from the insurgencies.

Bibliography

- Azami, D. (2018, December 22). How does the Taliban make money? *BBC News*. Retrieved July 4, 2020, from <https://www.bbc.com/news/world-46554097>
- Bleuer, C. (2012). Instability in Tajikistan? The Islamic Movement of Uzbekistan and the Afghanistan Factor. *Central Asia Security Policy Brief*, 7, 10.
- Bowman, T. (2016, July 6). Afghan Governor Wants Government To Control Poppy Crop. *NPR.org*. Retrieved January 5, 2020, from <https://www.npr.org/2016/07/06/484894669/afghan-governor-wants-government-to-control-poppy-crop>
- CBS News. (2017, March 1). Ex-users try to help Afghanistan's 3 million drug addicts. *CBS News*. Retrieved January 5, 2020, from <https://www.cbsnews.com/news/afghanistan-drug-addicts-volunteer-growing-addiction-hiv-rate/>
- De Danieli, F. (2014). Beyond the drug-terror nexus: Drug trafficking and state-crime relations in Central Asia. *International Journal of Drug Policy*, 25(6), 1235-1240.
- esri. (2019). Opium poppy production in Afghanistan. *esri*. Retrieved January 5, 2020, from <https://www.arcgis.com/apps/Cascade/index.html?appid=9e6420db54f043e487ba2831a74cb38f>

- Grare, F. (2008, February 27). Anatomy of a Fallacy: The Senlis Council and Narcotics in Afghanistan. *Carnegie Endowment for International Peace*. Retrieved February 5, 2020, from <https://carnegieendowment.org/2008/02/27/anatomy-of-fallacy-senlis-council-and-narcotics-in-afghanistan-pub-19937>
- Gretchen, P. (2009). *How opium profits the Taliban*. Washington DC: United States Institute of Peace.
- Hadid, D., & Ghani, K. (2019, October 29). Women And Children Are The Emerging Face Of Drug Addiction In Afghanistan. *NPR.org*. Retrieved February 5, 2020, from <https://www.npr.org/sections/goatsandsoda/2019/10/29/771374889/women-and-children-are-the-emerging-face-of-drug-addiction-in-afghanistan>
- Halbach, U. (2013). Afghanistan 2014: Shadows over Central Asia? *Security and human rights*, 24(2), 137–148.
- International Crisis Group. (2001, November 26). Central Asia: Drugs and Conflict. *International Crisis Group*. Retrieved January 5, 2020, from <https://www.crisisgroup.org/asia/south-asia/afghanistan/central-asia-drugs-and-conflict>
- Katawazy, A. S. (2013). *A Comprehensive study of Afghan saffron*. Kabul: Planning and Policy Directorate, Afghanistan Investment Support Agency.
- Kemp, W. (2010). *UNODC Reports Major and Growing Drug Abuse in Afghanistan*. Vienna: United Nations Office on Drugs and Crime. Retrieved January 5, 2020, from <http://www.unodc.org/unodc/en/press/releases/2010/June/unodc-reports-major-and-growing-drug-abuse-in-afghanistan.html>
- Mansfield, D. (2016). *A State Built on Sand: How Opium Undermined Afghanistan*. Oxford University Press.
- McDonald, R. A., Cornwell, S., Moreno, S., Munson, J., Owen, K., Theriault, K., Field, G., et al. (2011). *National Reconnaissance Almanac*. NATIONAL RECONNAISSANCE OFFICE CHANTILLY VA.
- Ministry of Counter Narcotic. (2015). *Afghanistan Drug Report 2015*. Kabul: Ministry of Counter Narcotic - Afghanistan. Retrieved January 1, 2020, from https://www.unodc.org/documents/afghanistan/UNODC-DRUG-REPORT15-ONLINE-270116_1.pdf
- Mishra, B. K., Rastogi, A., Siddiqui, A., Srivastava, M., Verma, N., Pandey, R., Sharma, N. C., et al. (2013). Opium poppy: genetic upgradation through intervention of plant breeding techniques. *Plant breeding from laboratories to fields*, 209–238.
- Piazza, J. A. (2012). The Opium Trade and Patterns of Terrorism in the Provinces of Afghanistan: An Empirical Analysis. *Terrorism and Political Violence*, 24(2), 213–234.

- Rowlatt, J. (2019, April 25). How the US war on Afghan opium was lost. *BBC News*. Retrieved October 5, 2019, from <https://www.bbc.com/news/world-us-canada-47861444>
- Rubenstein, J. M. (2019). *Contemporary Human Geography* (4th ed.). Miami: Pearson. Retrieved January 5, 2020, from </content/one-dot-com/one-dot-com/us/en/higher-education/program.html>
- Saffronice.com. (2019, May 7). What is the Real Price of Saffron in 2019? *Saffronice*. Retrieved March 5, 2020, from <https://saffronice.com/blogs/knowledge-centre/what-is-the-real-price-of-saffron-in-2019>
- Shanty, F. (2011). *The Nexus: International Terrorism and Drug Trafficking from Afghanistan*. ABC-CLIO.
- The Economic Times. (2018, May 22). Record-high opium production in Afghanistan creates multiple challenges for region and beyond: UN. *The Economic Times*. Retrieved December 19, 2019, from <https://economictimes.indiatimes.com/news/international/world-news/record-high-opium-production-in-afghanistan-creates-multiple-challenges-for-region-and-beyond-un/articleshow/64269549.cms?from=mdr>
- UNODC. (2008). *Afghanistan Opium Survey 2008*. Vienna: United Nations Office on Drugs and Crime. Retrieved December 29, 2019, from https://www.unodc.org/documents/publications/Afghanistan_Opium_Survey_2008.pdf
- UNODC. (2016). *Afghanistan Opium Survey 2016 - Executive Summary*. United Nations Office on Drugs and Crime. Retrieved November 29, 2019, from <https://www.unodc.org/documents/press/releases/AfghanistanOpiumSurvey2016.pdf>
- UNODC. (2018, May). Last year's record opium production in Afghanistan threatens sustainable development, latest survey reveals. *United Nations Office on Drugs and Crime*. Retrieved December 19, 2019, from <https://www.unodc.org/documents/press/releases/AfghanistanOpiumSurvey2016.pdf>
- Werb, D., Kerr, T., Montaner, J., & Wood, E. (2008). The need for an evidence-based approach to controlling opium production in Afghanistan. *Journal of Public Health Policy*, 29(4), 440-448.
- Xinhua. (2019, December 21). Afghan saffron products quality ranks world 1st. *Xinhua Net*. Retrieved January 5, 2020, from http://www.xinhuanet.com/english/2019-12/21/c_138648448.htm