

Opium cultivation in Afghanistan: A policy proposal based on lessons from Turkey and China

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Abstract

Due to instability and a lack of rural alternative livelihoods, Afghanistan's opium cultivation has skyrocketed over the past decade. The United Nations Office on Drugs and Crime estimates that Afghanistan supplies over 90% of the global illicit opium market. It is of the interest of Afghanistan and the international community that a solution is found to the nation's economic opium dependency.

By performing cross-case comparisons of Turkey's legalization and China's complete eradication policies, I propose a policy that better addresses the Afghan opium dilemma. Considering the nation's lack of security and alternative rural livelihoods, I propose Afghanistan:

- a) Limit eradication to only wealthy landowners within their realm of control
- b) Expand the alternative livelihoods program to include higher yielding crops
- c) Invest in irrigations systems and agricultural markets that support higher yielding crops
- d) Develop a public awareness campaign that focuses on agricultural education
- e) Test a state monopoly in certain regions where the government can exert itself
- f) Reconsider legalization in the future
- g) Ensure international support

Furthermore, I advise the Afghan central government to implement several of these policies concurrently and adapt them based on the security limitations in each region.

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Table of Contents

Introduction	1
Chapter 1. Afghanistan Overview	4
1.1 Lack of Security	4
1.2 Rural Livelihoods	7
1.3 Current Policy	11
1.3.1 Eradication	11
1.3.2 Alternative Livelihoods	12
1.3.3 Public Awareness	14
1.4 Barriers to Future Policy	14
Chapter 2. Turkey: A Case for Legalization	16
2.1 Background	16
2.2 Rural Livelihoods	18
2.3 Legalization of Cultivation	20
2.3.1 State Monopoly	21
2.3.2 Law Enforcement	22
2.3.3 Ensuring Demand	23
2.4 Results	24
2.5 Cross-Case Comparison	25
Chapter 3. China: A Case for Complete Eradication	27
3.1 Background	27
3.2 Lack of Security	28
3.3 Public Opinion	28
3.4 Complete Eradication	31
3.4.1 Incentives	31
3.4.2 Disincentives	33
3.4.3 Social Control	34
3.5 Results	34
3.6 Cross-Case Comparison	35
Chapter 4. Policy Proposal	37
4.1 Limit Eradication	37
4.2 Expansion of Alternative Livelihoods Program	39
4.3 Investment in Irrigation Systems and Agricultural Markets	40
4.4 Public Awareness Campaign on Agricultural Education	42
4.5 Small-Scale State Monopoly	43
4.6 Reconsider Legalization of Cultivation in the Future	44
4.7 International Support	46
4.8 Conclusion	46
References	48

Introduction

Afghanistan, officially the Islamic Republic of Afghanistan, is a landlocked country in South Asia that is bordered by Pakistan, Turkmenistan, Uzbekistan, Tajikistan, Iran, and China. It is 652,000 square kilometers and has a population of approximately 31 million people. According to the Central Intelligence Agency's *The World Factbook*, Afghanistan's GDP is \$45.3 billion, 101st in the world. Including licit operations only, the GDP is composed 20% by agriculture, 25.6% by industry, and 54.4% by services. Despite only accounting for one-fifth of licit GDP, agriculture employs 78.6% of the labor force.

In 2014 Afghanistan produced 6,400 tons of opium across 224,000 hectares of cultivation, accounting for **90% of the world's illicit production** and 7% of Afghanistan's cultivated land (UNODC, 2014 and FAO, 1997). Hectares used for cultivation represented a new record for Afghanistan, outstripping the previous year's record of 209,000. According to the United Nations Office on Drugs and Crime (UNODC), Afghanistan has led the world in illicit opium production since 1992, excluding 2001 when the Taliban enforced a strict and brutal ban. With decades of experience in being a major producer, Afghanistan has developed an opium economy that accounted for a farm gate value \$0.85 billion or 4% of GDP in 2014 (UNODC, 2014). The export value is estimated to be well over \$3 billion, mostly benefiting drug traffickers and anti-government elements (Basar, 2012). About 90% of the country's cultivation resides in regions rampant with anti-government elements and classified as a "high" or "extreme" security risk area by the United Nations Department of Safety and Security. Such a high percentage clearly displays a correlation between lack of security and opium cultivation. However, research shows that the correlation is not because of anti-government elements or drug traffickers seeking profits and attempting to undermine the government, but rather low income farmers in these regions

favor the opium crop for its ability to resist droughts, non-perishable quality, and its reliable demand (Mansfield, 2011). Opium has become a key rural livelihood strategy in rural communities and is not easily replaced by alternative crops.

While opium cultivation certainly has an impact on Afghanistan's ability to stabilize itself and become a secure country, its effects are felt across the globe. The UNODC estimates that the **global market of Afghan opiates is \$65 billion**, most of which profits international traffickers and retailers in destination countries. 26% is consumed in Europe (except Turkey and Russia), 21% in the Russian Federation, 13% in China, and 6% in the United States and Canada. With 66% of Afghan opiates being consumed in such influential countries, there is strong international will to address Afghanistan's rampant cultivation. The United States alone has invested over \$7 billion in counternarcotic assistance to Afghanistan since 2002, only to see opium cultivation increase to record levels (Rosen and Katzman, 2014).

For the benefit of Afghanistan and the greater world, an adjustment to the current opium policy is greatly needed. By analyzing two of the world's previous most prolific illicit opium producers, Turkey and China, my thesis aims to recommend policies that will better address Afghanistan's opium economy. Turkey's legalization and China's complete eradication both have proven successful. What can Afghanistan learn from these nations? Is legalization or complete eradication the best route? Throughout the discourse of this thesis, these questions will be analyzed and answered.

For edification of the reader, the introduction includes an opium fact sheet. Chapter 1 provides an overview of the opium economy in Afghanistan. Chapters 2 and 3 represent the Turkish and Chinese experiences, respectively. Finally, Chapter 4 offers Afghanistan a policy proposal based on the case studies.

Opium Fact Sheet



Source: Human Impact on Afghanistan's Ecology

- Opium is a winter or spring crop, depending on location. Cultivation calendars can vary greatly between the country's northeaster mountains and southern semi-arid province (Chouvy, 2009).
- It is sown from October to February and harvested 120 to 250 days later (Chouvy, 2009).
- Once the plant fully matures, its flower peddles fall off, exposing the round seedpod. The seeds themselves contain very small amounts of opiates and do not have a narcotic effect when consumed in small quantities (PBS, 1998).
- Within the seedpod is the sap that is used in morphine and heroin production. Farmers milk the pods by cutting them. As the sap oozes out, it becomes darker and thicker, forming a brownish-black gum (PBS, 1998).
- Farmers scrap the gum off and bundle it. They then sell the opium gum to morphine and heroin producers. This is the extent of most farmers' involvement (Mansfield, 2006).
- The opium gum is then mixed into lime and boiling water to create morphine. This is often done close to the market by the trafficker because morphine is significantly easier to smuggle than the gum itself (PBS, 1998).
- In a more advanced laboratory, the morphine is then mixed with other products to create heroin. Historically international traffickers have done this process; however, it is becoming increasingly more common to see heroin processing done in the cultivating country (Chouvy, 2009).
- The average seedpod produces 80 milligrams of opium gum (Booth, 1996).
- A hectare of poppy plants produces 15 to 20 kilograms of opium gum (Booth, 1996).
- On average, every 10 tons of opium gum produces 1 ton of heroin (Booth, 1996).

Chapter 1. Afghanistan Overview

Opium is not native to Afghanistan and there are no traditional uses of the crop. It has historically only been used in Afghanistan as a narcotic and medicine (Wahab & Youngerman, 2010). The crop was introduced by Mongolian invaders in the thirteenth century, but was isolated to just a few regions and annually never produced more than 100 tons till the 1970s (UNODC, 2003).

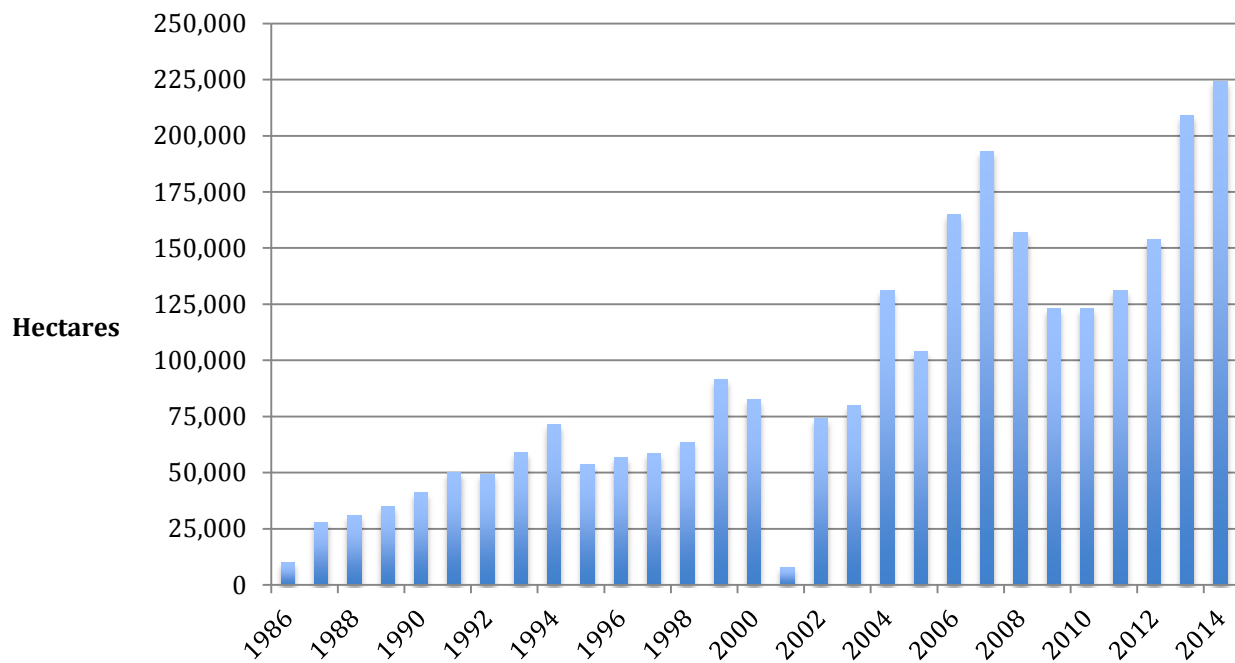
1.1 Lack of Security

The Soviet invasion of 1979 created a volatile environment that led to the expansion of opium cultivation. Substantial disruptions in agricultural production are well documented leading up to the increase in opium farming. Over 50% of villages were bombed, at least 25% of irrigation systems were destroyed, and the amount of livestock fell by 70% (UNODC, 2001). The UNODC estimates that by 1988 total food production was only 45% of pre-war levels. Fertilizers, once available to 75% of Afghan farmers, experienced a usage drop of 90% causing a significant drop in crop yield. Furthermore, rural areas were severely depopulated. Between 1978 and 1989, 9% of the total population was killed, approximately a third fled the country, and another 11% were internally displaced, mostly to urban centers (UNODC, 2001). The chaotic and unstable environment caused by the Soviet invasion led farmers to search for alternative livelihoods. Opium proved a highly profitable crop that could be easily grown across the country. On average, the UNODC estimates opium cultivation increased annually by 14% through the 1980s. By 1989, opium production had skyrocketed to 1,200 tons and represented 35% of global production.

After the Soviet withdrawal in 1989, opium cultivation further escalated due its profitability for farmers and the **need of income for warring factions within Afghanistan**. Fueled by civil war, opium cultivation covered 71,500 hectares that produced 3,400 tons in 1994 (UNODC, 2001). The profits of the opium trade proved crucial in the Taliban's ability to gain control of the majority of the nation in 1996. Opium cultivation under the Taliban's leadership would peak at 91,583 hectares and 4,565 tons of production in 1999 (UNODC, 2013). However, feeling international pressure over their human rights record; support of terrorism; and opium production, the Taliban supreme leader issued a total ban on opium cultivation on July 27, 2000. Through strict and brutal enforcement, the Taliban reduced opium cultivation to 8,000 hectares (91% decline from 1999) and total production to 185 tons, 4% of 1999 (UNODC, 2013).

The United States led invasion in the fall of 2001 destabilized Afghanistan and recreated an environment for the opium economy to flourish. Without a strong central government to enforce a strict ban, farmers immediately returned to the profitable crop. 2002's cultivation and production returned to pre-ban numbers. By 2007, cultivation had reached the new height of 193,000 hectares, more than double the peak under the Taliban (UNODC, 2013). The UNODC estimates that since 2007 annual production has varied from 3,600 to 7,400 tons accounting for 123,000 to 224,000 hectares of cultivation. The figure below based on UNODC data displays the growth of cultivation during the various times of instability. It adequately displays the role of outside involvement and volatility in opium cultivation, supporting the notion that historically a **lack of security has led to an increase in cultivation**.

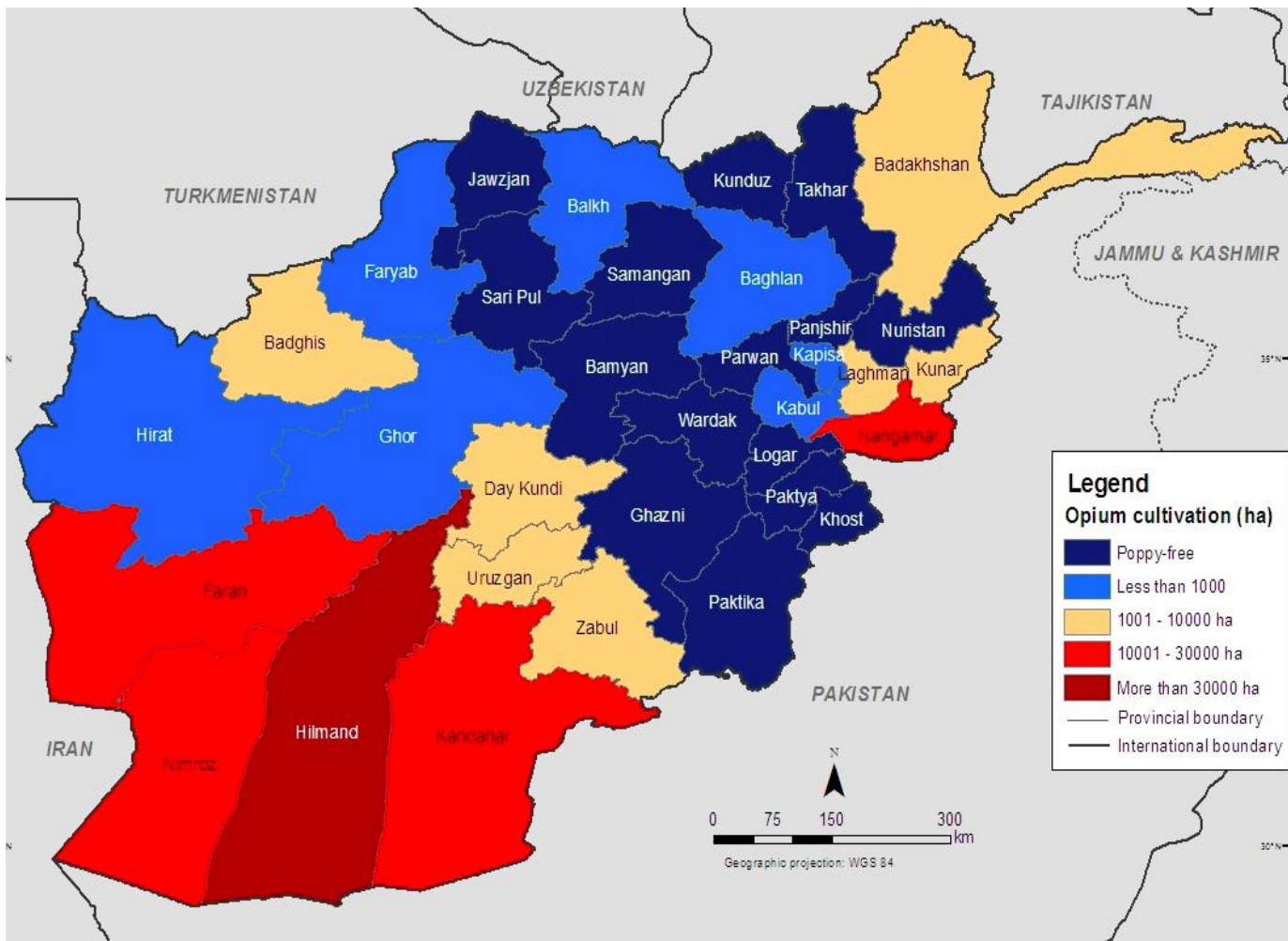
Figure 1: Opium Cultivation in Afghanistan, 1986-2014



Source: Based on data by the United Nations Office on Drugs and Crime

Furthermore, current opium cultivation within Afghanistan is mostly limited to areas outside of the central government's control, regions rampant with anti-government elements and drug traffickers. **About 90% of the country's cultivation occurs in the southern and western regions, which are by far the most insecure** (UNODC, 2014). The remaining cultivation mostly occurs in pockets of insecurities within the other provinces. The map of Afghanistan below provided by the UNODC displays cultivation in each province, but more importantly it shows the large geographic area that the central government is unable to police.

Figure 2: Opium Cultivation in Afghanistan, 2013 (At Province Level)



Source: UNODC Afghanistan Opium Survey 2013

1.2 Rural Livelihoods

Of the 25 million people living in rural areas, it is estimated that **3 million are involved in opium cultivation** (UNODC, 2014). Considering that Afghanistan's entire labor force is estimated at only 7.5 million, that is a substantial amount (CIA, 2014). A large part is farmers who would otherwise be below the poverty line. Living in rural areas, they usually have limited access to basic commodities, infrastructure, and large agricultural markets. They are faced with food insecurity, land scarcity, unemployment, and lack of access to credit. Opium cultivation

serves as a crucial rural livelihood strategy by providing low risk income, labor supply, credit, and a local selling point.

The UNODC reported that a hectare netted 28.7 kilograms of opium in 2014. **A kilogram of opium sold for \$133 on average, which equals to an income of \$3,817.10 per hectare.** The total farm gate value of opium in Afghanistan was \$0.85 billion, 4% of GDP. However, rural farmers are not the major financial beneficiaries. Instead, the estimated annual export value of well over \$3 billion mostly benefits drug traffickers and anti-government elements. Furthermore, the global market for Afghan opiates is approximately \$65 billion, with international traffickers and retailers in destination countries absorbing most the profits. Thus, farmers receive a very small portion of the total opium economy.

Moreover, Afghanistan's Ministry of Agriculture, Irrigation, and Livestock states that the average Afghan household has access to only 1 hectare of land. Needing to grow other crops for family sustainability, not all of that land is dedicated to opium. Licit crops are extremely important to rural farmers because they rely on them for income and as food supply. Therefore, opium cultivation is often done in less than a single hectare (Mansfield, 2011). Also, many opium farmers are sharecroppers and claim a minority percentage of the farm gate value of their harvest. While farmers profit enough to be better off than their counterparts who do not cultivate opium, they are still considered to be low-income earners (Zyck, 2012).

Crops that have comparable monetary yields, such as almonds, require a significant amount more water than opium (Palau, 2012). With an irrigation system destroyed by decades of war and frequent droughts, opium has proven to be far more resistant and reliable than such crops. Moreover, the relatively high yield means that farmers do not have to dedicate much land to opium to receive profits.

Furthering minimizing risk to farmers, opium is a non-perishable produce that transports well and has a reliable demand. Considering lengthy transport times across the country due to lack of infrastructure and frequent violence, the non-perishable quality is critical. Furthermore, it has a high unit value (\$133/kg). Based on these factors alone, **opium is less risky and more reliable than fruits and vegetables**. Also, in the absence of a tough anti-opium policy, the market for opium has proven extremely reliable and prices stable.

Opium is also a labor-intensive crop, requiring 350 person days to cultivate one hectare and 200 days for harvesting (UNODC, 2001). In comparison, wheat cultivation only requires 41 days (Palau, 2012). In a country with an official unemployment rate of 35% and an estimated underemployment of 50%, opium farming provides much needed labor (Druzin, 2013). Opium employs the entire farming household and usually requires significant outside labor too. Opium farm employment has proven so reliable that an entire migrant laborer movement has developed in Afghanistan. A UNODC study in Afghanistan's largest opium producing province, Helmand, reported that only 20% of the hired labor originated from that province. Afghanistan's multiple climates require locations to harvest at different times of the year, allowing migrant laborers to work multiple harvests in one year. Requiring so many laborers cuts into the profit margins for farmers; however, its low risk status and credit worthiness ensure its critical role in rural livelihoods.

With a lack of a formal credit system in rural Afghanistan, opium has proven to be a critical source of credit. Access to opium as an informal credit source helps ensure the survival of resource poor households. Throughout Afghanistan, food insecurity and the need for credit to meet food shortages is a serious dilemma. Opium's reliable physical characteristics and demand make those that cultivate the crop more creditworthy than others. They tend to get loans with lower interest rates and receive delayed payment opportunities (UNODC, 2001). In fact,

fieldwork has shown evidence that a reduction in cultivation causes lenders to be less likely to give loans because most loans in poppy-growing regions are tied to anticipated opium harvests (Zyck, 2012). Many opium farmers are able to attain advance payment for their harvest, which allows for the purchase of food, medicine, and other necessities (Mansfield, 2006). Even then, the advance payment is usually less than the final value so they get another payment at the time of selling. Moreover, many farmers use opium profits to finance investments in licit crops and other enterprises.

Finally, opium is easier to sell than many other crops. **Traffickers come to local “opium bazaars,”** minimizing the amount that farmers must transport the crop (Nicoletti, 2011). Living in areas with limited infrastructure and access to large agricultural markets, selling other crops takes considerable more time. The local “opium bazaars” save the farmers cost and ensure that they will have a buyer.

Opium has become a critical component of the rural livelihood strategy across the growing regions. Rural communities are desperate for a low risk crop that has reliable demand, high yields, provides credit, employs laborers, and is easy to sell. The correlation between a lack of security and opium cultivation is not as clear-cut as the UNODC proposes. Security issues are accompanied with poor infrastructure and a lack of access to basic commodities. Anti-government elements, terrorist groups, and drug traffickers are not forcing farmers to grow opium. They merely purchase it from them. The decision to continually cultivate opium is being made at the local level by low-income farmers. Fieldwork throughout the opium growing regions has discovered that **opium farmers are willing to cultivate other crops; however, it must make economic sense** (Mansfield, 2011). The large economic benefit of opium allows those farmers to be better off than their counterparts who do not cultivate the crop, but they are usually

still low-income earners. Policymakers must provide these farmers with alternative crops and infrastructure that can adequately replace opium.

1.3 Current Policy

The current policy is an initiative designed by Afghanistan, the United States, and the United Nations. Afghanistan receives approximately \$800 million annually from the United States government to implement the policy (Pothier, 2009). The strategy is based on eight pillars: public awareness, international and regional cooperation, alternate livelihoods, reduction in demand, law enforcement, criminal justice, eradication, and institution building. The need for a proper justice system speaks for itself and falls outside the scope of this thesis. While a reduction in domestic demand is an important national health issue, Afghanistan's opium is mostly being exported. Therefore, for the purpose of this thesis, I will focus on eradication, alternative livelihoods, and public awareness.

1.3.1 Eradication

Over a half of the United States' \$800 million in implementation aid is afforded to eradication (Pothier, 2009). Afghanistan's opium eradication program is entirely Governor led at the province level. From 2008 to 2014, the amount of opium forcefully eradicated annually ranged from 2,692 to 9,672 hectares (UNODC, 2014). For the same time period, 2.9 % of total hectares cultivated were eradicated. Additionally, the UNODC reports that in 2013 alone, 143 people were killed and 93 injured during eradication campaigns. The aim of eradication is to increase opportunity costs for farmers and encourage them to plant other crops. However, only 8% of those farmers who stopped cultivating opium in 2013 cite eradication as the main reason

(UNODC, 2013). In fact, research has show that it is normal for a farmer to have their crops eradicated multiple times, but continue to plant opium based on financial need and a lack of alternatives (Mansfield and Pain, 2006). This clearly shows that **eradication does not increase a low-income farmer's opportunity cost** because they do not have any other feasible options. Essentially, the program is capturing an incredibly small percentage of land cultivated and costing lives with practically no impact on opium production, as numbers have risen to historic levels.

Furthermore, **eradication incites distain of the Afghan government**. Feeling economic distress and lacking alternatives, local communities turn to other groups for relief, including anti-government elements and terrorist groups. These groups position themselves as protectors of the rural community by offering loans, protection, and a chance to plant again (Glaze, 2007). Moreover, the enforcement of the program is corrupt. Poppy fields eradicated are often chosen based on political relationships and willingness to pay bribes (Rosen and Katzman, 2014). Such open corruption just furthers distrust and dislike of the government.

1.3.2 Alternative Livelihoods

The primary focus of the alternative livelihoods program has been to distribute wheat seed and fertilizer. Seasonal vegetable, grapevine, and sapling seeds have also been distributed, but in significantly smaller numbers. Wheat seed distribution is limited to certain districts in the country. Up to 50% of famers in some district receive seeds, while there is no distribution in other areas (Mansfield, 2011). The Afghan government determines which regions to target based on dependence on opium cultivation and security concerns.

Unfortunately, **wheat yield is substantially less than opium** at \$320 per hectare compared to \$3,817.10 (UNODC, 2001). Requiring far less person days to cultivate, wheat is less costly than opium, but not enough to cover the huge yield difference. Many of the farmers who receive wheat seeds decrease their opium cultivation, but do not eliminate it. Instead, they use it to subsidize the wheat. Furthermore, in districts where wheat seed distribution is widespread, the market becomes oversaturated. The excess supply even causes prices to drop in areas not receiving seeds. Farmers receive far less revenues than expected and sometimes cannot sell their entire harvest. For the large number of low-income farmers, this is a serious setback. In response, farmers become even more inclined to cultivate opium (Mansfield, 2011). To make matters worse, seed distribution is conducted at the local level and is rampant with corruption.

The alternative season vegetable, grapevine, and sapling seeds also face significant barriers. Vegetables are far more difficult and costly to transport than opium. They are much larger and must be taken to a market that is further away than the “opium bazaars.” The lack of access to a large agricultural market prevents many rural farmers from being able to commit more hectares to vegetables. This is supported by research that shows farmers with closer proximity to urban centers are more likely to plant alternative crops (Mansfield, 2009). While grapevines have a yield comparable to or even greater than opium, they require significantly more water. In a nation that relies 90% of informal irrigation systems; has a water efficiency rate of 20 to 40%; and experiences frequent droughts, this is a major barrier (Rout, 2008). Farmers simply do not have enough water access to make grapevines and saplings profitable on a widespread scale. Moreover, farmers are poorly educated on how much water each crop needs. Overwatering is prevalent in all crops, exasperating water shortages and decreasing yields (Palau, 2012).

1.3.3 Public Awareness

The public awareness campaign is designed to educate the population on the dangers of narcotic use and the risks that farmers take being associated with the opium industry. The government utilizes community meetings, radio, television, and print. While anti-opium propaganda is sent out throughout the year, there is extra focus during the growing season in hopes of persuading farmers not to plant the crop (Miller, 2010).

It is extremely difficult to measure the effectiveness of the public awareness campaign. Only a few initiatives have had immediate impact, but that is expected. One successful initiative was the “sticky fingers” campaign that sought to educate farmers on the dangers of children harvesting opium (Miller, 2010). Children had been getting the sticky liquid used for drug production from the opium bulb on their hand. They were licking their fingers clean and developing an addiction to opiates. The program was able to educate farmers on the risk and children were used less frequently in this particular step or told not to lick their fingers.

The main shortcoming of the public awareness campaign is that it **solely focuses on the consequences of being involved in the opium economy**. The general populace is already aware of the dangers of the drug and that opium cultivation is illegal. Furthermore, farmers who grow opium usually understand its relations to drug traffickers and anti-government elements. While having such a public opinion on the dangers of opium is critical to slowly turning the tides over time, it does little to stop opium cultivation in the short run.

1.4 Barriers to Future Policy

The research detailed above showcases the many barriers to addressing Afghanistan’s economic opium addiction. A lack of security, the role of opium in rural livelihoods, the struggles

of alternative crops, limited irrigation systems and agricultural markets, counterproductive eradication, and a singular focused public awareness campaign all encourage the continuation of opium cultivation. Only an improved policy that better addresses all of these key areas can be successful in slowing Afghanistan's ever-growing opium economy.

Chapter 2. Turkey: A Case for Legalization

2.1 Background

Domesticated in the Mediterranean region, opium poppy cultivation can be dated back to the fourth millennium B.C.E in Turkey (Merlin, 1984). Prior to the nineteenth century, opium was used primarily for medical consumption and other traditional uses locally (Kasaba, 1088). Exportation began in 1838 when the United States began purchasing Turkish opium to trade to the Chinese narcotic market. Benefiting from increases in medical and narcotic demand from the West and China, Turkish annual opium production rose substantially in the 1840s to a peak of 37,500 tons with approximately 50% being exported (UNODC, 1950). By the 1880s, an estimated 80% of opium production was exported, accounting for roughly 12% of total exports. According to the UNODC, annual production through the early 1900s fluctuated from 17,500 to 35,000 tons.

With the crumbling of the Ottoman Empire, opium production in the early 1920s dropped substantially. The UNODC estimates that by 1931 Turkey's annual narcotic opium production had dropped to 1,680 tons. However, Turkey remained the world's largest opium supplier to pharmaceutical companies, accounting for over 50% of the global supply (Kasaba, 1988). Annually, approximately 226 tons were supplied to the pharmaceutical industry, not all of which was licit. From the collapse of the Ottoman Empire in 1923 to the 1970s, opium cultivation occupied 25,000 to 30,000 hectares annually, 0.3% of Turkey's total area under cultivation (UNODC, 1950). The number of Turkey's 81 provinces cultivating per year varied from 13 to 42 (Mansfield, 2001). The UNODC states that, with no agricultural technology to aid in tilling their fields, the 80,000 farming families only planted on average 0.1 to 0.3 hectares of opium.

As the United States embarked on its War on Drugs campaign, Turkey received an increasing amount of attention for its lax opium laws. While only producing 20% of the world's opium and 7% of the illicit narcotic market in 1970, Turkey was estimated to supply 80% of the heroin that would eventually enter the United States (McCoy). The Turkish government warned that eradicating opium production would be extremely difficult and unpopular, with at least 70,000 farming families and tens of thousands others benefiting from the crop (Kamminga, 2009). While opium production represented a negligible part of the greater Turkey's GDP, it was crucial to sustainability in rural areas. Undeterred by the warning, the United States government continued pushing for a ban and offered an aid package of \$35.7 million to ease the transition (McCoy). Turkey advocated that the aid amount was insufficient, but eventually conceded and outlawed opium cultivation in 1972.

Despite eliminating the bulk of Turkish opium from the market, the United States' heroin addiction showed little change, proving wrong the propaganda that Turkey was responsible for the nation's drug issues. Essentially, other nations increased illicit production to replace Turkey's, leading to no decrease in world supply (McCoy). Moreover, a world shortage of medical opium developed and international pharmaceutical companies began to lobby the United States government to reverse its position on Turkey. Meanwhile, through channels of corruption and an inadequate aid amount, Turkish farmers did not receive a large enough compensation for their opium income losses (Kamminga, 2011). Additionally, in many of the regions where opium was grown, there seemed to be no plausible substitute for the crop (Evered, 2011). Therefore, combined with strong domestic political support and waning opposition from the United States, the Turkish government chose to legalize opium cultivation in 1974.

Feeling decades of international pressure, the upper levels of the Turkish government recognized the potential benefits of eradicating their illicit opium production. For one, it would at

minimal placate the United States and halt their threats to remove economic aid. Furthermore, they recognized that global opium production and consumption being under such intense international scrutiny provided an opportunity to access large amounts of UN and US aid. Also, it offered the central government a chance to showcase its effectiveness to the Turkish people. As a final incentive, internationally recognized legalization would allow the Turkish government to openly tax the opium industry for the foreseeable future. Under these strains of thought, **the upper levels of the Turkish government were deeply committed to enforcing** the new opium cultivation laws and eliminating any possible diversions from the state monopoly (Windle, 2013).

2.2 Rural Livelihoods

Since the opium harvest is before the grain harvest, it is done during a time when farmers have little else to do. The farmers rely heavily on opium income to meet the expenses of the main harvest (UNODC, 1950). Furthermore, with centuries of experience cultivating the crop, rural communities have **numerous traditional uses for the opium plant**.

Farmers crush the poppy pods and remove the seeds, approximately 60% of the weight of the pod (Kamminga, 2011). The seeds are prevalent in a variety of breads, pastries, soups, salads, and deserts. Additionally, the seeds are crushed to form a peanut butter like paste that is used in dough or eaten directly (Evered, 2011). Moreover, since there are no olive trees in most of the opium growing areas, the oil extracted from the seeds is extremely important and used heavily in cooking. Due to their high calorie content, poppy based food is popular during Ramadan and is prevalent in most ceremonies, whether they are religious or not. Also, seeds are used to produce cow and fish food. It is believed that cows fed with poppy seeds produce thicker milk than normal. The region of Afyon is particularly famous for its thick cream, kaymak, which is made

from such milk. Any seeds that are not used personally by the farmer and his family are used as another source of income and sold within the village (Kamminga, 2011).

In addition to being a food supply, the opium plant serves as a form of medicine, construction tool, and fuel source. Boiling the capsules produces a liquid substance that is claimed to fight against headaches, stomach problems, and coughing (Kamminga, 2011). Also, many mothers insist that opiates help solve discomfort from teething pains in infants (Evered, 2008). The stalks of the opium plant are used in brick making, as a thatch for roofing, and as a source of fuel for local ovens. The ashes of the stalks are then used in making soups (Evered, 2011).

In most cases, opium farmers experience a slightly higher standard of living than others in their respective village (Evered, 2008). However, as opium sales only make up 10 to 20% of their income, they often use it to subsidize at least one more source (Kamminga, 2011). For example, farmers may rely on dairy farming, but usually less than 10 cows. Also, aniseed, sugar beets, and roses are popular options. Due to farmers' successful production mix of opium and one or two other crops, Turkish villagers only import tea, coffee, and other such products (Evered, 2011).

The opium plant is an important aspect of rural livelihoods. Villagers have depended on it for centuries as a source of food, medicine, construction, and heating. Moreover, when a farmer's family does not utilize all of the poppies, which is usually the case, it serves as an additional source of income. These centuries of usage created an **important role for opium not only in rural Turkey's culture, but also in its sustainability**. A plant with so many uses that can be grown in the most arid of landscapes proved invaluable and hints at why the crop substitution program attempted during the opium ban failed.

2.3 Legalization of Cultivation

The Turkish government's 1974 Decree clearly differentiated between opium cultivation and production. Cultivation was legalized in seven provinces; however, production remained banned. Previously, farmers selling to state controlled facilities producing morphine would incise the poppy pod and collect the opium gum. Incising opium pods is strictly forbidden and enforced at the time of state purchase. Instead, farmers are required to cut and crush the poppies. The crushed poppies, or poppy straw, are then sold to the state for production (Windle, 2013). Poppy straw includes all of the plant except for the seeds, which farmers are allowed to keep (UNODC, 1981). **A special processing plant in Bolvadin utilizing expensive and innovation technology** then extracts the morphine from the straw. Without this particular equipment, morphine extraction from poppy straw is extremely difficult and costly (Mansfield, 2001). The innovative poppy straw method helps eliminate illicit production and prevent farmers from being able to extract the necessary narcotic portions while still selling to the state.

As the Turkish government had hoped, the internationally community was equally committed to eliminating illicit cultivation and through the **United Nations provided a number of assets** to aid in law enforcement. In 1974, the United Nations Fund for Drug Control provided 94 jeeps to help Turkish law enforcement agents cover rural territory, part funded the innovative poppy straw processing plant, and donated \$5 million for counternarcotic support. The UN and World Bank afforded counternarcotic training, rural technical advice, financial counsel, and funds for crop substitution. Through 1994, the UN funded several vehicles, two aircrafts for aerial surveillance, communication equipment, and the construction of storage facilities. Such widespread international support and funding proved crucial in Turkey's ability to enforce the opium laws (Windle, 2013).

2.3.1 State Monopoly

The Turkish Grain Board is assigned the responsibility of administrating and monitoring the state opium monopoly. The board, including both licensing and the purchasing of opium, controls every transaction done between farmers and the government. Not including the poppy farmers, the Turkish Grain Board employs over a thousand people to control the opium industry. 295 of which are responsible for purchasing the opium from farmers at 82 local centers (Kamminga, 2011). Thus, keeping farmer's transportation cost at a minimal. At the state run processing plant in Bolvadin, another 304 people work in three shifts on the production and purification process (Kamminga, 2011). The entire control system costs approximately \$7 million annually (Jones, 2008). The Turkish Grain Board, which is responsible for supervising a variety other traditional crops, derives 10% of its revenues from opium (Mansfield, 2001). According to the board, after subsidizing the industry, covering all related costs, and attaining related revenues, the opium control system comes to a break-even, essentially covering its own costs. Therefore, other than diverted resources, the Turkish government bears no economic burden in supporting legal opium cultivation.

Farmers apply to the board for a license. Only land-owning farmers who live on the land they are cultivating, are over the age of 18, and have no criminal record can be granted a state license. Each licensed farmer are guaranteed by the village's *Muhtar* or elected opium official (Windle, 2013). Plots must be rotated regularly among each farmer's various small-scale holdings and must be smaller than 1 hectare. Farmers are allowed to separate the seeds to use for local consumption. However, the farmers are required to sell certain weights of capsules to the government based on the amount of land they were permitted to cultivate (UNODC, 1975). The Turkish Grain Board travels to each main opium center to purchase directly from farmers. To help prevent diversion, the state pays a fixed price across all provinces that is higher than the

market rate (Windle, 2013). Next, the state transfers the capsules to the Turkish Grain Board operated poppy straw processing plant in Bolvadin for morphine production (UNODC, 1975). Processing the opium within Turkey helps lower the chance of any of the crop entering the illicit market.

Traditionally, opium was cultivated throughout Turkey; however, in 1974 it was farmed in only 13 provinces. Initially, the Turkish Grain Board designated 7 provinces covering 20,000 hectares that could continue to legally cultivate opium (Windle, 2013). Selective legalization with a focus on western provinces increases control and ensures that the rural areas with the greatest need receive the opportunity. Also, areas with the greatest history of opium cultivation receive preferences. For example, the province Afyon, which literally means “opium” in Turkish, is a licensed territory (Evered, 2008).

2.3.2 Law Enforcement

To ensure that the program is properly enforced at the local level, the central government unleashed significant funds to three primary institutions: the gendarmerie, Turkish Grain Board, and farming communities. Making each group dependent on the same funding is meant to encourage them to work together in enforcing compliance. Furthermore, the grain board’s agricultural agents might be uncomfortable performing policing duties while the gendarmerie may not desire such deviation from traditional law (Windle, 2013). Such large funding and involvement with other institutions encourages each to take opium law enforcement seriously.

For farming communities, being able to cultivate such a profitable crop greatly encourages compliance. Each licensed village elects a *Muhtar* to work with the gendarmerie and Turkish Grain Board in monitoring production. The *Muhtar* is required to report any suspicious

activity. To prevent corruption at the village level, *Muhtars* lose their position and are heavily fined if any diversion is discovered. Additionally, if a single farmer cultivates over their licensed amount, action is taken against the entire community (Windle, 2013). Thus, there is strong community pressure for *Muhtars* and licensed farmers to follow the law.

During cultivation, Turkish Grain Board agricultural agents inspect licensed farmers a minimum of six times, formulate an expected yield, and provide agricultural advice. Farmers are only allowed to harvest the opium after an agent has verified that no incising has occurred. Due to the dry environment, any scars on the plant from incising are easily identifiable. If any such scars are found, farmers lose their license and have their entire opium crop eradicated. Further action is also usually taken against the entire community. To help prevent corruption, all inspection results are signed off by the agricultural agent, licensed farmer, and *Muhtar*.

The gendarmerie performs widespread surveillance and investigation in licensed areas. Through unplanned visits and frequent aerial surveillance, the gendarmerie enforces cultivation requirements. As the opium harvesting season approaches, surveillance is escalated significantly. In areas where diversion is suspected, undercover agents are utilized. The gendarmerie is also assigned the task of surveying unlicensed areas for illegal cultivation. Any unlicensed farmers found cultivating opium are fined and have their crop eradicated (Windle, 2013).

2.3.3 Ensuring Demand

To ensure that there is demand for Turkey's licit opium, in 1979, the United Nations Economic and Social Council created Resolution E/RES/1979/8, which encourages those countries manufacturing opium-based medicine to purchase their narcotic raw materials from legally producing nations, such as Turkey (ECOSOC, 1979). Additionally, in 1981 the United

States Drug Enforcement Agency created Regulation, “80-20 Rule,” which states that **at least 80% of the United States’ supply of raw opium must originate from either Turkey or India** (DEA, 1981).

2.4 Results

Successful implementation ensured that illicit opium production was **almost entirely eliminated by 1975**, only 1 year after the policy’s inception. With a stable and strong central government committed to preventing diversion, international support, the innovative poppy straw processing plant, and deep cultural ties to opium cultivation, Turkey has extended its success in licitly producing opium across nearly 40 years. Turkey has been heralded in the international community for its ability to monopolize the opium industry with practically no diversion to narcotics. So much so, that from 1998 to 2008 only 556 kilograms of illicit Turkish opium was seized, accounting for .1% of total global seizures (UNODC, 2010). Additionally, domestic narcotic consumption has remained minimal (Evered, 2011).

At the macroeconomic level, Turkey’s opium industry remains export based. The UNODC estimates that 95% of raw opiates are exported to countries that produce opium-based medicine. Turkey’s annual opium exporting industry, including poppy seeds and medicines produced in state, totals to \$60 million (Gecin and Hakbilen, 2005). According to the Turkish Grain Board, Turkey annually produces and exports 90 tons of morphine and 38 tons of derivatives based on morphine to 40 different countries. The Turkish production plant supplies 15% of the world demand for morphine (Kamminga, 2011). Turkey’s opium cultivation has proven to be crucial not only to their micro economy, but also the entire world.

However, the **largest beneficiaries are rural communities** licensed to cultivate opium, which now spread across fourteen provinces and 70,000 hectares (Evered, 2011). While technological advancements have sped up the process, cultivating opium is still labor-intensive. According to the Turkish Grain Marketing Board, approximately 1000,000 poppy farmers are licensed each year. However, this number does not include a vast amount of individuals who participate in the process and gain employment through the traditional uses of the plant. Whether directly or indirectly, it is estimated that over 600,000 people benefit financially from opium cultivation (Kamminga, 2011).

2.5 Cross-Case Comparison

While Turkish and Afghan rural communities are both economically dependent on opium, the numerous traditional uses of the crop in Turkey acts as a clear and important difference. Turkey's government had to find an alternative crop that could be just as profitable and be used in foods, medicine, construction, and heating. This proved not possible, which was key in their reasoning to legalize cultivation. In contrast, **Afghan policymakers only need an alternative crop that can match opium's profitability**, a far simpler task.

But Turkey's central government has been stable and strong for decades. They have no issues extending to rural communities to enforce laws. On the other hand, Afghanistan is a fragmented country whose central government has very limited control in opium growing regions. Diversion from a state monopoly would be prevalent. Setting up a licensing system, monitoring crops, purchasing at local markets, limiting corruption, and enforcing the law across the entire country is not feasible considering Afghanistan's current security situation.

On a positive note, the current international will on addressing opium is very similar to when Turkey legalized cultivation. Turkey successfully leveraged its opium economy to get substantial aid from the United States and United Nations. Similar to in Turkey, if Afghanistan were to propose a legalization policy that would eliminate their illicit market, implementation aid would be likely. Additionally, Afghanistan may be able to secure a market for its licit opium via a trade deal similar to Turkey's with the United States and United Nations.

Chapter 3. China: A Case for Complete Eradication

3.1 Background

Arab traders first introduced opium to China in the 7th century. For centuries China used opium only for its medicinal values (Baumler, 2001). In the mid 1600s, Dutch merchants introduced the Chinese to the method of mixing opium and tobacco and smoking it through a pipe. Throughout the 1700s, opium importation would steadily increase, from 13 tons in 1729 to 286 tons in 1800 (La Motte, 1920). In the 1820s, the British sought to expand its Indian opium exports to China. As a result, the amount of opium imported quadrupled from 636 tons in 1820 to 2,545 tons in 1838 (Ebrey, 1996).

In 1839, feeling the economic impact of significant amounts of silver flowing out of the country due to the opium trade and out of fear of what opium usage was doing to its population, China requested that the British stop or greatly reduce their opium exports. England refused and from 1840 to 1843 the First Opium War was fought. In the Second Opium War (1856 to 1860), France joined the battle against China's attempt to halt opium importation. China lost both wars in an embarrassing fashion and had to make serious concessions after each (La Motte, 1920). 20th century Chinese would later mark **the opium wars as the start of a “century of humiliation” by foreign powers** (Janin, 1999).

Accepting defeat after the Second Opium War and looking to maximize their economic benefit from the industry, the Chinese government allowed tracts of land to be used for opium cultivation in 1858 (La Motte, 1920). While the main goal was to keep money from fleeing China, the lower quality of Chinese opium when compared to Indian ensured that opium importation did not reduce (Baumler, 2001). Instead, the introduction of Chinese opium

cultivation significantly increased the amount of those economically dependent on the industry and the availability of the narcotic.

3.2 Lack of Security

While the birth of opium cultivation and usage in China was caused by foreign involvement, the overall **lack of security within the country created an ideal environment for the crop to flourish**. A weak central government rampant with corruption and limited by local power holders proved incapable of controlling the industry. By 1905, China led the world in opium cultivation (La Motte, 1920). China's Warlord Era of 1917-1935 only worsened the problem. Seeking to maximize revenues and fund wars, warlords expanded opium cultivation and imposed extraordinarily high land taxes on farmers refusing to cooperate. As a result, Chinese opium production skyrocketed during a period that featured famines and economic recessions. Opium cultivation peaked in 1930 with estimations citing as much as 60,000 tons produced, over 90% of the world's illicit supply (Windle, 2011). This remains the most amount of opium produced by a country in a year.

China remained fragmented till 1949, when the Communist Party assumed control of the central government. By slowly expanding itself throughout the country, the Communists brought control and order to China. Finally, China's security void was filled, allowing the nation to properly address its illicit opium economy.

3.3 Public Opinion

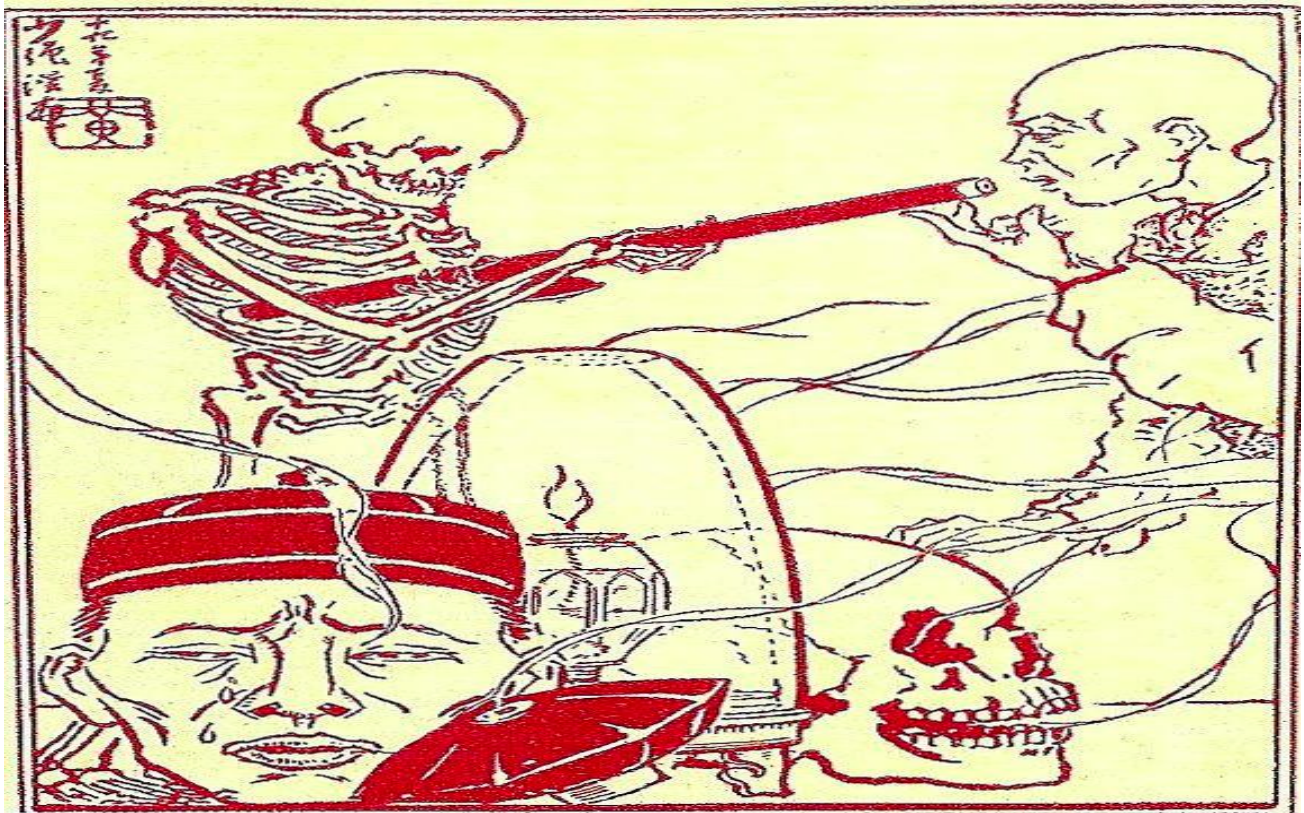
Despite its presence across China, the opium plant was only be used for its medicinal and narcotic values (Baumler, 2001). Thus, keeping its cultural impact being viewed as entirely

negative and limiting those emotionally attached to the industry to those profiting financially and addicts. The general public associated opium not only with foreign involvement and instability, but also with rampant corruption and as a horrific narcotic.

Corruption was prevalent at every level of the government. At the local level, police and municipal governments required opium farmers, merchants, sellers, and users pay fines to avoid arrest. Any opium suppression reforms passed by the central government were merely used for extortion. Moreover, province governors and opium prohibition officers were often former opium smugglers and sought to expand the industry. While central governments denounced opium publicly, they too sought taxes, bribes, and other revenues from the industry, complicating their interest in solving China's opium problem (Baumler, 2001).

While domestic opium narcotic consumption was already a serious concern prior to the 1858 cultivation legalization, the flooding of the market with Chinese opium led to a decrease in prices that increased availability and demand substantially. In addition, China continued to receive imports from foreign powers. As a result, opium users increased from 3 million in the 1830s to 13.5 million in 1906 (McCoy). An estimated 50% of the population consumed opium regularly (Windle, 2011) and 10% could be considered addicts in 1930 (Baumler, 2001). While responsible users could remain productive members of society, only an estimated 2-3% of addicts could do sustained labor (Baumler, 2001). Addicts were completely at the mercy of their addiction and would often resort to criminal activity such as gambling, prostitution, or theft. Therefore, an increase in addicts was correlated to an increase in criminals. The Chinese general public considered opium addicts an embarrassment, burden, and described them as “fond of eating, but dislike work” (Baumler, 2001). Moreover, China's wide scale domestic consumption earned it the moniker “the sick man of Asia” and brought considerable criticism from the international community. The image below is a propaganda piece from China in 1930 displaying

the effects of opium on a man. It highlights opium as a narcotic bringing great sadness and poor health to the user. Such propaganda had been prevalent in China for decades before the Communist Party's eradication, setting an ideal public opinion of opium (Baumler, 2001).



Source: Collectors Weekly

Already perceived as an evil forced upon China by foreign powers and propelled by instability, opium increasingly became viewed as a tool of corruption and a substance that would decay Chinese morale, culture, and society. After experiencing centuries of government corruption, public opinion in the 1930s had shifted to the belief that China could not return to its previous prestige without removing the “opium evil” and that only a policy of “no surrender” could be successful (Baumler, 2001). Furthermore, the general public considered opium users shameful and viewed the crop as a “disease” (Windle, 2011). These beliefs provided the Communist government the political capital necessary to eliminate opium.

3.4 Complete Eradication

The Chinese Communist Party attained office in 1949. By 1952, they had largely unified the country under their authority (Ebrey, 1996). In 1950, they undertook the Decree Regarding Suppression of Opium and Narcotics. The Communist Party found backing for the Decree by highlighting foreign powers' role in using opium to weaken China, the rampant corruption within previous governments seeking opium revenues, and the horrific side effects addiction had on its victims and the greater Chinese society (Baumler, 2001). **Propaganda was widespread** and the Communist Party used the opium affliction as an opportunity to showcase their effectiveness as a government (Windle, 2011).

The Communist Party's **method for eradication depended on their level of authority in each province**. In areas completely under their authority, the ban on production was quickly enforced through public humiliation, executions, and near constant surveillance (Windle, 2011). The minority and frontier areas required a more nuanced and gradual approach. Overall, the anti-opium campaign had three key components: incentives, disincentives, and social control.

3.4.1 Incentives

With the goals of extending the state and increasing their support, the Communist Party introduced crop substitution, land redistribution, infrastructure projects, and social welfare programs to minority areas before enforcing the law (Windle, 2011).

Precise information on the Communist Party's crop substitution plan is limited; however, broad initiatives are documented. Improved seeds and modern technology was distributed to farmers across China to encourage a switch to grains (Fairbank, 2006). Additionally, there was a high focus on tobacco growth and cigarette manufacturing. An increase in annual cigarette

production from 80 billion in 1949 to 238 billion in 1959 shows the successful expansion of the tobacco industry, which aided farmers' transitions from opium (Lowinger, 1977). Furthermore, central control of agricultural planning and management was being implemented as part of the party's greater initiatives.

The Communist Party used land redistribution and landlord punishment as an opportunity to increase their popularity and individual investment in their government. They removed landlords who were unpopular within their communities or refused to cooperate, freed slaves, and assigned land to those who supported their anti-opium policies. An estimated 60% of rural populations benefited from land redistribution, giving them a direct investment in the success of their new government (Fairbank, 2006). After being abused by warlords and taken advantage of by other governments, **rural populations rallied around the Communist Party and their policies, easing state extension.**

Curtailling domestic demand was crucial to the plan. Even if the government was successful in eliminating production, opium consumption could stay at the same level due to imports. The Communist divided their plan to address addiction into three stages. The first stage required the registration of all addicts at the local level. Secondly, medical facilities that focused on opium withdrawals were built. Thirdly, strict laws were put into place to prevent new addicts. The final stage was started after stage one, but not enforced till an appropriate amount of medical facilities were built. To avoid apprehension amongst users, initial registration only had moderate control. Control and consequences became stricter over time. The government's propaganda machine played a large part in encouraging addicts to register and receive treatment, promising them a purer spirit and dignity (Baumler, 2001).

3.4.2 Disincentives

In the first two years of the Decree, the Communist Party employed multiple campaigns to rid themselves of corruption and large-scale opium traffickers. Using extensive intelligence gathering and investigation, they had four nationwide waves of arrests between August 1952 and October 1952. During this massive roundup, the Communist Party arrested 82,056 of the 396,705 individuals they targeted (Windle, 2011). 34,775 were imprisoned or executed, 2,1388 were imprisoned in labor camps, 6,843 were placed under surveillance, and 4,337 were uncategorized (Chang, 2004). Major offenders were prosecuted during mass rallies in which 800 to 880 individuals were publicly executed (Chang, 2004). It is widely believed that this is a gross underestimation of the amount publicly executed. The Communist Party's had calculated a specific percentage of those prosecuted that would be executed: enough to remove high level traffickers or potential opposition and inflate the risk for lower-level offenders (Windle, 2011).

The severity of law enforcement in each area depended on the strength of the Communist Party there. In minority or frontier areas where the state had not fully extended, fewer key individuals were targeted with a particular focus on those who were unpopular in their communities or highly opposed to the party's policies. Forced eradication was resisted violently in many areas. Therefore, propaganda was sent out pleading to local leaders to halt opium production. Additionally, the Communist Party waited for the crop substitution and land redistribution incentives to be in full effect before forcefully eradicating the opium crops in those areas. Fearing the loss of their new government assigned land and the harsh punishment of the previous landlords, most farmers voluntarily uprooted their poppy plants (Windle, 2011).

The Communist Party discouraged opium consumption by spreading propaganda that portrayed opium users as useless, shameful, and a burden to society. While they avoided

punishing addicts in the judicial system, public shaming and forced treatment was widespread (Baumler, 2001).

3.4.3 Social Control

While beyond the scope of this paper, it is important to note the impact of the Communist Party's greater goal of social control and encouraging state dependence in achieving opium eradication. Necessity rations, housing, healthcare, traveling abilities, education, and employment all being determined by the Communist Party substantially increased their control over the populace. In an essential police state, criticism from the party was greatly feared which created unusually high levels of compliance.

3.5 Results

By 1953, areas under the Communist Party's authority had completely ceased opium production. After further state extension and incentive policies, minority and frontier areas had voluntarily removed the majority of their opium crops by 1957. With greater state control, the Communist Party did a final sweep in 1958 and 1959, forcefully eradicating any remaining opium and arresting approximately 3,000 drug offenders (Windle, 2011). **By 1960, opium production in China had been entirely eradicated.** Illegal importation and domestic consumption also dropped to insignificant levels (McCoy).

Since 1960, the Chinese central government has remained fairly stable and has only strengthened. Opium consumption was largely nonexistent till 1976. Since then China has experience a steady increase in consumption; although, it is almost entirely imported (Swanstrom and He, 2006). **Modern day illicit opium production in China is considered negligible** and

limited to very isolated areas. Opium produced in these areas is not smuggled to bigger cities or exported, but is consumed by its growers. In recent years, China has begun state controlled opium production for its domestic pharmaceutical industry (INCB, 2014). According to the International Narcotics Control Board, China produced 5.2 tons licitly in 2010, none of which was exported (INCB, 2011).

3.6 Cross-Case Comparison

Similar to Afghanistan, the expansion of Chinese opium cultivation was caused by foreign involvement and a lack of security. The Communist government was able to paint opium as a relic of an unstable and violent time flooded with foreign involvement. The Chinese general population thus viewed opium as an evil forced upon them and were eager to remove it. Propaganda showing the poisonous opium as a result of pervasive foreign involvement, violence, and volatility could help Afghanistan garner the necessary general public support to further enforce a ban.

Furthermore, persuading state actors that this is an opportunity for them to showcase their effectiveness could build support for a ban within the Afghan government. In China, a successful ban encouraged communities to rally around the Communist government, which they would use to further entrench themselves and fully expand to all of China. Additionally, **Afghanistan should consider following China's approach of adapting different strategies for each region based on security.** A policy that gradually expands over time in each region based on the strength of the central government could be successful in Afghanistan.

However, even though the Communist did not have full control over China when they began implementing their opium ban, they were considerably stronger than Afghanistan's current

government. China's strong central government, aided by social control and population fear, successfully exerted significant influence across the country. **Enforcing such a strict ban would require a much stronger Afghanistan government than the present.** Moreover, the Afghan government would not be able to use China's brutal tactics of executions and massive imprisonment. Such actions would cost Afghanistan a substantial amount of international aid.

Chapter 4. Policy Proposal

Afghanistan's current opium policy is clearly flawed. An over reliance on eradication, lack of legitimate alternative crops, poor agricultural infrastructure and irrigation systems, and a narrowly focused public awareness campaign all limit the effectiveness of the current policy. Furthermore, the central government is severely constrained by a lack of security and fragmentation of the country. Flexibility of the opium policy, based on the security situation of each region, is completely lacking. An appropriate policy is not a "one size fits all" strategy; a much more nuanced approach is required. I offer a policy recommendation that accounts for rural communities' economic dependence on opium and security concerns. Considering these two major constraints, I propose Afghanistan limit eradication to only wealthy landowners within their realm of control, expand the alternative livelihoods program to include higher yielding crops, invest in irrigations systems and agricultural markets that support higher yielding crops, develop a public awareness campaign that focuses on agricultural education, test a state monopoly in certain regions where the government can exert itself, reconsider legalization in the future, and ensure international support.

4.1 Limit Eradication

As multiple researchers' fieldwork indicates, Afghanistan's eradication policy is proving counterproductive (Mansfield, Pain, Glaze, Rosen, and Katzman). Comparable to Turkey, eradication is not increasing opportunity costs for the majority of farmers because they have no other legitimate options. Additionally, the policy is creating an anti-government stance in rural communities. Farmers who do not share the ideology of anti-government elements are being forced to seek their financial aid and protection, creating a dependence and fondness of the

insurgents. While large *absolute* eradication numbers may be nice for publicity purposes, de facto eradication is very limited in *relative* terms. Furthermore, such actions damage low-income farmers' financial status and alienate rural communities. In a fragmented state, Afghanistan cannot afford to have such an errant policy. Currently, Afghanistan is wasting over \$400 million annually of United States aid on eradication, money that could be better used on alternative crops, agricultural infrastructure, and interdiction of high-end traffickers (Pothier, 2009). **I propose that Afghanistan completely halt eradication of low-income farmers' crops and instead focus on wealthy landowners within their realm of control.**

For one, wealthy landowners have considerably more to lose to eradication and thus, face higher opportunity costs. As they are not dependent on opium for economic stability, they are simply maximizing profits without fear of consequence. A complete loss of a profitable opium harvest can be extremely costly. When eradication occurs, wealthy landowners recognize the profits loss and what could have been gained by planting licit crops. David Mansfield's research supports these premises. According to his fieldwork throughout the country, wealthy landowners were far less likely to replant opium after eradication. Simply put, they have other options that may not be as profitable, but have considerably lower risk.

Afghanistan should limit their selective eradication to regions that they have operational control over. Eradicating local power holders' crops in a region with limited government support could turn public opinion in favor of anti-government elements. Similar to in China, Afghanistan should slowly expand its eradication program as the central government gains authority of more territory. Unlike China, Afghanistan should not consider a widespread forced eradication policy.

4.2 Expansion of Alternative Livelihoods Program

Focusing the crop substitution program on wheat is clearly not working. With such a low monetary yield compared to opium; oversaturation of local markets; and a limited rollout, farmers have had to continue cultivating poppy plants. In contrast to Turkey, Afghanistan only needs alternative crops that can match opium's profitability. Researchers across Afghanistan have supported this notion, as farmers have said they are willing to switch to alternative crops if it makes economic sense (Mansfield, Fishstein, and UNODC). **I propose that Afghanistan expand their alternative livelihoods program to include seed distribution of high yielding grapes, pomegranates, almonds, and any other reasonable substitute crop.** Furthermore, I recommend that these seeds be distributed across the country, regardless of central government authority.

As researchers have illustrated, there are multiple crops that could have higher yields than opium. Grapes, pomegranates, and almonds all have been shown to have comparable yields to opium (Palau, Oureshi, and Rout). In fact, they could even be more profitable. The UNODC estimated opium yield of \$3,817.10 per hectare is substantial, but is cut deeply into by high labor costs. According to researcher Rainer Palau, costs per hectare of cultivation are \$2,063. This drops farmers' net income per hectare to \$1,754.10. In comparison, grapes, pomegranates, and almonds all require substantially less labor, increasing farmer profit margins. Palau estimates that the net income per hectare for grapes, pomegranates, and almonds are respectively \$18,194, \$12,828, and \$16,068. With no cultural tie to or other uses of opium, farmers would readily switch to such profitable crops.

Therefore, the Afghan central government should begin distributing these seeds across the country, even in areas with security concerns. Similar to Communist China's approach, Afghanistan could use the distribution of seeds as an opportunity to garner support for their

government in areas outside their control. Even if the government cannot be as involved as liked in the distribution and agricultural education process, it displays good will to rural communities. While in some regions it may prove difficult to safely distribute the seeds, every attempt by the government to do so must be taken.

However, distributing these seeds alone will not be enough. Each of these high yielding crops requires more water than opium, appropriate local markets, and agricultural education. Thus, the alternative livelihoods expansion should be released concurrently with investments in agricultural infrastructure and irrigation systems as well as a new public awareness campaign.

4.3 Investment in Irrigation Systems and Agricultural Markets

In order for the alternative livelihoods program to be successful, it must be accompanied by an investment in irrigation systems and agricultural markets. Facing frequent droughts and a depleted irrigation system, farmers turn to opium because of its ability to flourish with minimum water. Increasing water supply will allow farmers to plant the higher yielding alternative crops. Additionally, farmers will need somewhere to sell their new crops. Opium is attractive because drug traffickers travel to local “opium bazaars,” minimizing transportation costs and ensuring demand. The Afghan government will need to invest in agricultural markets for farmers to sell their grapes, pomegranates, almonds, and other new crops at.

A major barrier to high yielding crop implementation is the large amount of water they require, compared to the negligible amount of opium. However, many researchers argue that Afghanistan does have enough water to cultivate such crops (Palau, Qureshi, Rout, and Kuhn). They argue that Afghanistan needs to focus on developing irrigation infrastructure and educating farmers on good watering techniques. While formal systems only make up 10% of irrigation,

their potential is much higher (Qureshi, 2002). Due to a lack of funding, they operate at under 20% of capacity (Rout, 2008). Moreover, farmers are poorly educated on how much water each crop needs. Overwatering is prevalent in all crops, exasperating water shortages and decreasing yields (Palau, 2012). An improvement in water supply and techniques opens up the possibility of using more grape, pomegranate, and almond seeds. All of which feature higher yields than opium and far less labor requirements (often 1/10 of opium), but require significantly more water (Mansfield, 2009). Therefore, the Afghan central government should substantially increase their investment in irrigation systems. They should begin by focusing on formal and informal systems within their territorial control, maximizing their capacity potential. Water improvement projects should be done in less secure regions whenever possible.

Moreover, it is imperative that the alternative crops and improved water supply be near new agricultural markets. The high yielding crops are useless if farmers do not have a market to sell them at. Government officials should look at creating local markets to purchase high yield licit crops, similar to drug traffickers “opium bazaars.” As they have a much higher profit margin than opium, farmers will be able to afford more transportation costs to sell the alternative crops, but it must be within reason. David Mansfield’s fieldwork has illustrated that farmers who live closer to such markets are more likely to plant crops other than opium. Therefore, these market investments should be made immediately in regions where the government has control. Markets should be expanded into higher security risk areas as soon as possible.

Even if they are in a smaller scale, irrigation and agricultural market projects display the central government’s good will and effectiveness to rural communities, garnering their support. China’s tactic of doing such infrastructure projects before fully expanding to peripheral territories proved crucial in the local communities embracing the Communist government. If alternative crops, irrigation systems, and agricultural markets are executed properly, Afghanistan could have

a similar positive outcome. However, rural communities must be fully aware of these projects and how to benefit from them. Therefore, a public awareness campaign focusing on agricultural education must also occur concurrently.

4.4 Public Awareness Campaign on Agricultural Education

The Afghan central government must accompany their other policy efforts with a public awareness campaign that focuses on agricultural education and the new infrastructure investments. Farmers with no experience in cultivating the new alternative crops will need education on the best practices. Additionally, they will need to use water more efficiently to maximize their profits. Finally, they must be aware of the government's efforts in providing them new irrigations systems and agricultural markets.

Fieldwork has shown that Afghan farmers have gotten frustrated with new crops in the past and transitioned back to opium (Mansfield, 2011). In order to maximize their profits and ease their transition, farmers should be supplied information on best cultivating practices. Such education will be critical in attaining high yields. Furthermore, famers should be educated on proper watering techniques. In the past, farmers have overwatered crops, exacerbating water shortages and decreasing yields (Palau, 2012). Using water efficiently will be crucial in ensuring that enough water is available, costs remain low, and proper yields are attained. Lastly, farmers must be informed of the government's investments in agricultural markets and irrigation systems. For one, they will need knowledge of these to manage their water properly and see their crops reach their full potential. Moreover, the propaganda will showcase the government's role in improving their life, increasing rural support for the central government.

The alternative crops, agricultural markets, and irrigation systems must be accompanied with a well-designed public awareness campaign or all efforts will fail to make

proper impact. The central government should employ all the public awareness tools in their disposal. Community meetings, field visits by agricultural experts, television appearances, radio ads, newspapers and printed pamphlets should all be utilized. Using so many different methods will ensure that at least some public awareness information will reach even the most insecure regions of Afghanistan.

4.5 Small-Scale State Monopoly

Implementing a completely new rural livelihood strategy will take a considerable amount of time. Rather than forcing farmers to leave the opium economy before they are willing or able, the state should establish small-scale monopolies in select regions they can operate in. Purchasing opium directly from farmers will increase the amount of contact government officials have with farmers, allowing them to monitor their transition progress and provide technical assistance. Also, such regions will act as an experiment in case the state wishes to consider a wider scale legalization policy in the future.

It is crucial that any small-scale monopoly be in a region that the central government can exert itself in. Otherwise, the task may prove to dangerous to pursue and diversion will be plentiful. Similar to Turkey, Afghanistan should look to limit diversion by purchasing opium at above market prices, ensuring that farmers sell to the state instead of drug traffickers. It is plausible that farmers may travel from other regions to sell their opium to the state. This is not a problem as it ensures that the opium is not entering the illicit market. However, the government should check for cut marks to certify that the crop has not already been milked for its opium gum. If such marks are found, the crop should not be purchased.

Not only does this begin to remove some illicit opium from the market, it also increases government interaction with farmers, forming a relationship. Officials purchasing the opium should monitor farmer progress towards using alternative crops and make themselves available to provide technical advice. Farmers will face difficulties in implementing the new crops. Having an opportunity to get assistance or advice from a government official could prove critical to the new crops' success. Moreover, government officials being available to rural communities further showcases the good will and effectiveness of the central government.

Finally, a small-scale state monopoly offers the government an opportunity to experiment with legalization. If the central government does successfully expand itself to all of Afghanistan and rampant opium cultivation persists, despite the alternative crop program, it may be necessary to consider a national legalization policy. Therefore, an opportunity to see the effects of a monopoly on a smaller scale could be extremely useful in future policy discussions. Implementing it on a smaller scale will allow the central government to note the financial and resource investments required, barriers of enforcing the state monopoly, and the success of alternative crops.

4.6 Reconsider Legalization of Cultivation in the Future

If the Afghan security situation is solved and the alternative livelihoods program fails to decrease rural economic dependence on opium, it may be necessary to reconsider a legalization of cultivation policy. In such a case, Turkey provides an excellent example of legalization with practically no diversion to illicit markets. If Afghanistan were to ever consider such a route, they would have to carefully implement the policy and ensure that no crucial components are neglected.

For one, a strong central government that can enforce the law throughout the opium growing regions would be required. Secondly, a poppy processing plant that further depresses diversion would be a necessity. Turkey's rare poppy processing plant allows the government to require farmers to crush their seedpods, which makes extraction of the opium gum arduous and costly. Thus, limiting diversion from the state monopoly.

Finally, Afghanistan would have to ensure a demand for their licit opium. Turkey successfully has their supply met *via* a trade agreement with the United States and a United Nations resolution encouraging countries to purchase their licit opium from legally producing countries. Afghanistan would have to negotiate a similar status with the international community. However, some researchers argue that this may not be so straightforward (Windle, Rosen, and Katzman). They site that international demand is already met for licit opium. In their opinion, Afghanistan entering the market would cause a supply surplus. On the contrary, other researchers propose that there is a large demand for pharmaceutical opiates in underdeveloped countries that is unmet (Capo, Slipup, and Cark). They push for a paradigm that would allow these countries to get their necessary medical supplies, while Afghan rural communities profit from the cultivation. Either way, it would be critical for Afghanistan to properly resolve the licit demand dilemma before legalizing cultivation.

Cultivation legalization is an extremely complicated process. Preventing diversion requires a significant amount of resources and expertise. In Afghanistan, it **should only be used as a last resort**. There should be two key requirements before it is even considered by policymakers. For one, the central government must be stable and strong enough to exert itself across all of Afghanistan. Secondly, the alternative livelihoods program fails to relief rural communities economic opium dependence, despite considerable effort to do so. If those two

events occur, Afghanistan can look at the Turkish model and their own small-scale state monopoly for guidance.

4.7 International Support

International support will prove crucial in implementing my policy recommendations for Afghanistan. In order for any of the policy initiatives to work properly, international funding will be required. Similar to when Turkey implemented their legalization of cultivation policy, international scrutiny of Afghan opium is high. Afghanistan should look to benefit from this and continue to **leverage their opium economy for necessary counter-narcotic aid**. In order to maximize their international support, the entire Afghan government must be committed to and politically invested in the new opium policy. While outside the scope of this paper, eliminating corruption and uniting the government behind the opium cause will be critical not only in attaining international support, but in ridding the country of its economic dependence on the crop.

4.8 Conclusion

Addressing the Afghan opium dilemma is a top concern of not only Afghanistan, but also the international community. By performing cross-comparisons of Turkey's legalization and China's complete eradication policies, I propose a policy that better addresses illicit opium cultivation. Considering the nations lack of security and alternative rural livelihoods, I recommend Afghanistan:

- a) Limit eradication to only wealthy landowners within their realm of control
- b) Expand the alternative livelihoods program to include higher yielding crops
- c) Invest in irrigations systems and agricultural markets that support higher yielding crops
- d) Develop a public awareness campaign that focuses on agricultural education
- e) Test a state monopoly in certain regions where the government can exert itself
- f) Reconsider legalization in the future
- g) Ensure international support

Furthermore, I advise the Afghan central government to implement several of these policies concurrently and adapt them based on the security limitations in each region. While implementing such policies will take considerable time and resources, eliminating Afghanistan's illicit opium market is worth the investment. By having a central government that is committed to and politically invested in addressing illegal opium cultivation, Afghanistan should be able to secure the necessary international aid for the counter-narcotic strategy. With proper resources and patience, the proposed policy will substantially decrease illicit opium cultivation.

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