

The causes of illegal drug industry
growth in the Andes, anti-drug policies
and their effectiveness

The causes of illegal drug industry
growth in the Andes, anti-drug policies
and their effectiveness*

Francisco E. Thoumi

Centro de Estudios y Observatorio de Drogas y Delito –CEODD–
Facultad de Economía, Universidad del Rosario
Bogotá, marzo de 2005

© Francisco E. Thoumi
© Centro Editorial Universidad del Rosario

ISSN:

Todos los derechos reservados
Primera edición: marzo de 2005

Impresión: Cargraphics
Impreso y hecho en Colombia-Printed and made in Colombia

I. Introduction

Illegal drugs have become a key and conflictive policy issue in the Andean countries. Anti-drug policies are today part of government policy agendas and the object of frequent debate. In 1961 the United Nations signed the Single Convention on Narcotic Drugs. This was followed by the 1971 Convention on Psychotropic Drugs and the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.

In 1972 President Nixon declared a “war on drugs” raising drug issues in the policy agenda of the United States and other countries. It is clear that governments’ have been attempting to control and regulate mind-altering drugs use for a long time. Their results, however, have been at best highly questionable. Today cocaine and heroin are widely available, new drugs have appeared in the market, new markets have developed and new criminal and subversive organizations entered the illegal drug business. Advocates of current policies would argue that without them things would be worse. Those who oppose them content that policies themselves are at fault and have contributed to increase the social costs of drug production, trafficking and consumption. The debate about anti-drug policy effectiveness most of the time is emotionally charged and does not advance the understanding of drug phenomena.

This essay analyses the nature of the drug policy formulation problem, describes a theory of competitive advantage in illicit drugs, draws some policy implications from this theory, analyses the characteristics of the main drug producing countries that make them prone to develop the illicit drugs industry, surveys the evolution of anti-drug policies in the Andean countries, discusses some of the main challenges confronted by the policies currently used, summarizes the main effects that the illegal drug industry development have had on those countries, assesses the viability of drug policy reform and makes a few suggestions to marginally modify some policies and to improve policy dialogue as a pre-requisite to improve drug policy effectiveness.

* This paper was written with funding from the World Bank. The author thanks the comments of Guillermo Perry and an anonymous referee who are exonerated from any responsibility. The opinions expressed in this essay are the author’s and do not intent in any way to reflect World Bank policies or opinions.

II. The Nature of the Policy Formulation Problem

Anti-drug policies have been formulated following a pattern frequently found in common anti-crime policies. Unfortunately, there is no consensus about the reasons why crime develops and grows in a society. Crime has been associated to many factors: poverty, alienation, genetics, race, ethnicity, gender, political sentiments and affiliation, family structure, education levels, etc. Because crime causality is unclear, confusing and difficult to establish, policy makers frequently opt to take measures that in their eyes and those of social organizations and groups contribute to protect society from criminals. In other words, protecting or to be seen as protecting law abiding citizens take precedence over understanding causality. This creates a bias in favor of repressive policies which has been the case when dealing with mind altering illegal drugs. These have implicitly been formulated under simplistic assumptions about the causality of illicit drug demand and supply. Furthermore, issues related to mind altering drugs are deeply rooted in the institutions, structure, values and mores of a society and in every society there is strong resistance to analyze its internal structural and institutional weaknesses. At the same time, it is very comforting to define the “drug problem” as one rooted abroad. Historically the United States has tended to define the “drug problem” as one generated by illicit drug supplies that invade the country and has supported policies that “go to the source” in mainly producing countries. The Andean countries on the other hand, have defined the “drug problem” as one of demand: “when there is demand, there is supply” is an assertion frequently made to justify illicit drug production and the Andean governments’ inability to control illicit drug supply. These exculpatory discourses are politically useful but they avoid a deeper analysis and understanding of the underlining causes of the development of the illicit drug market and lead to confrontational interpretations of policy motivations and goals. Furthermore, they appeal to nationalist feelings that contribute to polarize the drug policy debate and make policy evaluation very difficult, increase distrust and become an obstacle to understanding opposite views.

In order to formulate effective policies it is necessary to understand the root causes of drug consumption, trafficking and production. To do so it is required to acknowledge the complexity and multi-disciplinary and multidimensional aspects of mind-altering drugs’ issues. These have to do with morals and ethics, public health, economics, politics, international relations, anthropology, sociology, law and legal systems, statistics, chemistry, ecology and other disciplines. The complexity and multi-disciplinary aspects of drug

issues imply first, that no one can master all their aspects. Not surprisingly, any policy based on a single discipline has a very high probability to generate “unintended consequences” that prevent policy success.¹

Second, the knowledge about many policy effects and policy interactions is weak and uncertain. Indeed, the weakness in the knowledge about many drug issues is remarkable. This is true not only in the social sciences but also in the hard ones. For example, policies such as forced crop eradication, laboratory destruction and mandatory jail sentences, among others, are justified because of their deterrent effects. In fact, nobody knows the magnitude, if any, of these effects which, in any case, are likely to vary across countries and cultures. Forced eradication and alternative development policies aim to substitute legal for illegal crops. There is evidence that these policies displace illicit crops to other locations but no one knows the strength of this effect. Similarly, aerial spraying of illicit crops in Colombia is implemented because the state cannot eradicate manually but nobody knows the full magnitude of its environmental effects due to the chemicals used or the displacement of people and crops it generates. Similarly, nobody really knows the extent of coca plants’ development of resistance to the herbicides used.

On the demand side one can list many similar cases. For instance, knowledge is very weak about which drugs are substitutes or complementary of each other. Besides, cross-country drug consumption behaviors differ and are likely to depend on cultural aspects. Questions such as why the United States consumes a lot of cocaine and relatively little heroin and why Western Europe consumes a lot of heroin relative to cocaine are never raised.² Current policies assume that marihuana is an “entry” drug that leads to the use of other more dangerous drugs such as cocaine and heroin and this assumption cannot be questioned or tested.³

1 Some economist designed policies might have political reactions that prevent obtaining the results sought. Policies designed by political scientists frequently lead to negative economic effects. Policies designed to eliminate illegal crops can have devastating effects on the environment and so on. Some authors think of these “unintended consequences” as just a policy effect (Tullis, 1995) rather than the result of policies formulated using very narrow approaches.

2 The typical economist’s answer that “tastes” account for this difference is not satisfactory and avoids the real issue.

3 The evidence shows that most cocaine, heroin and amphetamine users in the United States and Europe have used marijuana before. It also shows that most marijuana users do not go on to use cocaine and heroin. Furthermore, cocaine and heroin users disproportionately come from broken homes, have had abortions and premature births and have consumed alcohol and tobacco. Yet, nobody thinks of criminalizing these “entry” behaviors to cocaine and heroin use. Questions aiming to clarify the link between marijuana and harder drugs such as: does marijuana use create a craving for other drugs? Or do hard drug users have personalities prone to exploration, experimentation that would have led them to hard drugs if marijuana were not available, cannot not be raised in the policy making process.

Uncertainty also extends into the realm of morals and ethics. Let's consider, for example, two cases: a parent who supports penalization of drug possession to protect his or her children from drug dealers, and another who supports decriminalization to make sure that his or her children's lives are not ruined by a life-time criminal record if they make a mistake. Which of these two parents has the moral high ground? The choice between these two positions depends on individual values and one cannot argue that one is absolutely superior to the other.

The role of morals and ethics in drug policy formulation presents other problems. First, there is no agreement about the role of mind-altering drugs in human life. There are at least two conflicting positions held by those who argue that the only legitimate uses for mind-altering drugs are medical and research and by those who argue that there is room for recreational and other uses. These positions vary significant across cultures that can be classified in two groups: cultures that consider that mind-altered states of mind are a legitimate part of the human experience and those that argue that they should not be.⁴ Current policies and the United Nations Conventions allow only medical and research uses for drugs in their "Schedule 1." These include coca and cocaine, opium and heroin, marijuana, amphetamines and other commonly used drugs. For those who do not accept recreational, ritualistic and other uses, any use outside medicine and scientific research is considered abuse. For them, the only possible policy goal for drugs that today do not have medical uses is to ban them.⁵ The issue for those who consider that there is room for recreational and other uses is not to eliminate drugs but to allow their controlled and restricted use in order to limit the social costs generated by possible drug abuse.⁶

The lack of consensus goes much beyond moral and ethical issues. There are several interpretations about the motivations behind the formulation of anti drug policies. Many Latin American intellectuals, for example, deny the importance of ethical and moral issues in the formulation of prohibitionist policies and provide a purely economic and imperialist motivation. "Far from generating any wealth in Colombia, (illegal drugs) have drown the country in corruption and violence. In the United States the drug business increases its gross domestic product; in Colombia it destroys it" (Caballero 1996: 139).

4 Ancient Greece and many American native cultures clearly fall in the first category. Puritanism falls clearly on the second.

5 Cocaine is a good local anesthetic, particularly for some eye surgery procedures, but it has very good substitutes that make it unnecessary today.

6 There could be a few extremists who would argue that people should be allowed to use mind altering drugs without any restrictions, but they make a very marginal group with few adherents outside fringe social groups.

Statements like this do not have any support in economics, but they are generalized in the Andean countries and make virtually impossible a fruitful dialogue among those holding opposite views.⁷

The lack of consensus about the uses of drugs and policy goals reflect deep cultural differences among societies that lead to conflictive views. It can be argued that in regards to drugs and drug policies affecting the Andean countries, “there are three very important muted conflicts. First, a conflict between American Puritanism that seeks to punish those who break moral norms and the Latin Americans’ anomie that rejects those norms as an improper imposition by the state and convinces them that they ‘know’ that behind every policy there are hidden economic interests. Second, a conflict between American Puritanism and European pragmatism that seeks to lower the social costs associated to drugs. Finally, a conflict within the Andean societies between the elite in exclusionary political systems and the Indians, peasants and urban groups that feel excluded from power and that see in the drug industry an instrument that gives them power and the ability to climb socially” (Thoumi, 2005).

Despite the glaring knowledge gaps and uncertainty, the strong convictions of those who advocate particular policies, and the difficulties in questioning them, allow policy advocates to act as if policies were formulated with certitude and accurate knowledge about their effects. In fact, most anti-drug policies have been reactive to political pressures and are formulated without asking basic demand and supply causality questions and without having a reasonable idea about their probability of success.

Summarizing, drug policy formulation and implementation have been influenced by many factors that transcend drug issues and involve basic values, beliefs and attitudes. In fact, policies toward mind-altering drugs like those related to gender, gambling, religious tolerance and political dissent have been culturally and institutionally determined in every society and provide a fertile battlefield for the cultural clashes that arise in the globalization process. These clashes are exacerbated by attempts to homogenize those policies across countries.

The complexity, weak knowledge, multi disciplinary aspects and culturally diverse interpretations of all drug related issues indicate that there is no single reasonable way to deal with mind-altering drugs. Any sensible

⁷ For this statement to be valid, it is necessary to show how prohibitionist policies that increase the price of cocaine and heroin imports in the United States, increase aggregate demand in that country. If this were valid, we had found a very innovative development theory based on illegality that would prescribe the prohibition of common imports such as cigarettes and cellular telephones to increase their prices and the profits of domestic criminal organizations in developing countries to increase their national income.

polymaking process must take these factors into account and also allow for policy adaptation and evolution in response to changing realities and increases in knowledge. In fact, drug policies have been formulated in a way that resembles a trial and error process with a high probability of failure. Success requires the capacity to change course in response to institutional changes and policy evaluations, a feature lacking in the current policy making process.⁸

One way in which drug policy formulation can be advanced is simply asking the hard causality questions mentioned above: why does a country produce or consume drugs when many do not? Or why does a country produce or consume drugs at one point in time and not at another? Currently these questions are not asked and policies respond to simple questions of the “how to” rather than “why” type. For example, when asking how can cocaine supply be lowered? One simple answer is eradicating coca plantings. Because this answer is based on simplistic assumptions about why peasants grow coca, instead on an understanding of their decision making process and the ways peasants look at the world, the probability of long-term policy success is quite low. Unfortunately, “why” type questions frequently produce answers that are not politically palatable or “correct” and they tend to be avoided.

III. The competitive advantage in illegal drugs.

There is no question that demand played a role in the development of the illicit Andean drug industry, but there is also no question that if demand and profitability were the determinants of illicit drug production, the illicit industry would not have grown following the pattern it did. A simple look at the geographical distribution of the illicit industry raises important questions about the role of profitability in its development. Indeed, if profits determined location, illicit drugs, a very high profit industry would grow in every location that had the inputs necessary for its development. In other words, the industry would spread to all countries where it could be established. This is clearly the case of legal industries that have simple, stable and known technologies and require labor skills that are common around the world. The production of coca-cocaine and poppy-opium-heroin clearly fit this description.

8 Many policy makers do not acknowledge this fact and indeed, argue that they do adapt their policies to changing realities. For example, María Victoria Restrepo, the Director of the Alternative Development program, part of Plan Colombia, explained at a seminar on Alternative Development policies at the Universidad de Los Andes on September 7, 2004, that the new programs have been formulated reflecting the lessons from the past. These lessons were drawn, however, to improve the programs but never considered the possibility to drop the programs. In other words, current policies could be improved but the current policy strategy could not be questioned.

Opium and coca paste must be produced near or at the producing farms but heroin and cocaine can be refined anywhere in the world.⁹ Indeed, the production processes of these drugs are characterized by production functions typical of footloose industries.

Contrary to the expectation of a widespread spatial distribution, the illegal drugs industry is highly concentrated in a few countries. Furthermore, several countries that were important producers in the past, when those drugs were legal, do not produce illegal drugs now despite their profitability. During the last 44 years, since the Single Convention of the United Nations made coca and cocaine illegal, coca production has been concentrated in Bolivia, Colombia and Peru. The shares of coca production of these three countries have varied through time but their total has accounted for over 95% of coca production throughout this period.¹⁰ Interestingly, during the first 40 years of the XX Century, while cocaine was legal, the largest coca suppliers to the cocaine industry were Indonesia, Malaysia and Taiwan (Gagliano, 1994, and Gootenberg, 1999).¹¹

Beginning in the early 1970s Colombia concentrated illegal cocaine manufacturing and since then it has remained the largest cocaine producer in the world. By the mid-1990s it had also become the largest coca grower in the world.

Opium poppy can grow in a larger number of countries than coca but its production is also concentrated in a few countries. In 2003 three countries (Afghanistan, Laos and Myanmar) accounted for 91.5% of the world's illegal acreage of poppy and 95% of the potential opium output (UNODC, 2004: vol. II, 205). Adding Mexico and Colombia, the two next largest producers that supply the American market, these shares increase to 96.8 and 97.9% respectively.

Data on synthetic drug production are much weaker than that for plant based drugs for which estimates based on the cultivated areas can be obtained. The United Nations uses laboratory seizures as a proxy for synthetic drug production. These data also show very high concentration. In 2001 Australia, Russia and the United States accounted for about 90% of all the amphetamine and methamphetamine laboratories seized (UNODC, 2004:

9 In the late XIX and early XX centuries coca leaves were traded internationally and processed at great distances from the crop locations (Gagliano,1994). At that time large laboratories maintained a monopoly on refining technology that by today's standards is quite simple and well known. Thus, today there is no need to incur in the high transportation costs and risks incurred in coca leaf international trade.

10 The United Nations data show that currently only these three countries grow coca (UNODC, 2004)

11 Indeed, Peruvians complained bitterly of not being able to export coca until the "Japanese occupation of the Netherlands East Indies (Indonesia) and the British coca outlets in Asia closed important supply sources for the United States and its wartime allies. Peruvian coca was sought to fill the need" (Gagliano, 1994: 147).

vol. II). Other less known illicit drugs like khat, peyote and yajé are also produced in very few countries or regions. Marijuana is the only illicit plant grown in a large number of countries.

The striking differences between the geographical pattern of licit and illicit production highlight the importance of illegality in determining production location. To understand why these patterns differ, it is necessary to find what it is required to produce illegal goods that it is not required to produce legal goods. In order to produce illegal drugs it is necessary to perform “several industry-specific tasks that are not required by licit activities:

1. To trade in illegal inputs, which are frequently controlled substances and have to be smuggled and/or obtained on an underground market.
2. To grow illegal crops.
3. To develop clandestine drug manufacturing systems.
4. To sell illegal products on the domestic market.
5. To smuggle the final product out of the country.
6. To develop illegal marketing networks abroad.
7. To transport illegally obtained currency across international borders and to exchange these funds from one currency to another without revealing their origin.
8. To launder and invest illegally obtained funds, and to manage portfolios of illegally obtained capital.

The successful performance of these tasks requires special ‘illegal skills’ used to develop illegal business organizations, social support networks to protect the industry from law enforcement efforts, and contract enforcement and conflict resolution system within the criminal organizations, and to have the will to break economic laws and regulations and to use violence if necessary” (Thoumi, 2003a: 56).

The point is quite simple. Once a good or service is made illegal across the world, illegality generates competitive advantages in countries or locations where the rule of law is weak and prohibition laws and norms are socially or culturally dismissed.

All societies have confronted the problem of controlling and regulating individual behaviors that are deemed to generate social costs. Societies have differed in their assessment of what behaviors have to be controlled. These have included, among others, political and religious dissent, certain sexual and gender behaviors, the use of mind-altering drugs, gambling, arms and weapons’ possession and use, interracial marriage and socializing and the like.¹²

¹² Escobotado (1999) shows how mind-altering drugs have been used by all societies. They have always been associated to medicine and religion that have regulated their use.

Once a particular individual behavior is deemed to require regulation and control, societies have several options open to them. These involve three types of controls imposed by the state, other social institutions and those internalized by individuals through socialization and education. These three types of controls are interrelated and they may either complement or conflict with each other. In a harmonious country, state laws and regulations would reflect social mores and individuals' internalized controls and all controls reinforce each other. In countries where there is a significant degree of cultural diversity, state controls might conflict with the social mores of some groups. In these cases, successful behavior control requires a greater degree of state repression. In other words, when state norms are reinforced by and reflect social mores, law enforcement is easy. Otherwise, the rule of law becomes very difficult to enforce.

A short survey of the characteristics of countries, regions and social groups that are actors in the illegal drugs industry highlights the importance of the rule of law and a central state that enforces it across its territory. As noted, coca production is concentrated in three countries: Colombia, Bolivia and Peru but Colombia has concentrated cocaine manufacturing and developed the best trafficking networks. Illegal poppy and opium production is also concentrated in Afghanistan, Myanmar and Laos and in the past it was produced in significant quantities in the Northwest Frontier Province of Pakistan, in Turkey and in isolated areas of Thailand.

Bolivia and Peru have bi-national societies in which large Indian populations have been excluded from power and exploited during several centuries by a white and mestizo dominant group. Coca cultivation in Bolivia and Peru until the late 1960s was directed to the local market and done by peasants and Indians who were not stakeholders in mainstream society.

Coca and poppy are grown in Colombia in recently settled areas where the state has had a very weak presence.¹³ Many of the settlers in these areas arrived displaced by political violence. The residents of all these areas consider themselves abandoned by the state. In many instances, left and right wing guerrillas have substituted the state and established order in those regions.

Drug trafficking has frequently provided funds to support insurgent and independence movements: FARC and ELN in Colombia, Shinning Path and the Tupac Amaru Revolutionary Movement (MRTA) in Peru, the Taliban in Afghanistan, and similar groups in Chechnya, Albania, Kosovo, and other

¹³ Some could argue that in places like Putumayo peasants' settlements have not been recent because they settled 30 or 40 years ago. However, one wonders if this is time enough to develop strong roots and communities.

countries and nations. Interestingly, illegal drugs also have funded counter-insurgency movements (AUC) in Colombia and the Contras in Nicaragua.¹⁴

Colombia has concentrated cocaine and heroin manufacturing in the Andean countries. The two large original Colombian “cartels” located in Medellín and Cali were composed by individuals who had strong social exclusion feelings for whom drug trafficking was a legitimate way to enrich themselves and compete with the traditional elite (Salazar, 2001, ch. 1, Arango, 1988, ch. 5, Chaparro, 2005, ch. 6).

Ethnic minorities and individuals who do not have strong loyalties to mainstream society have been the core of drug trafficking networks in the United States. During prohibition (1919-1932) American criminal organizations were predominantly made up by Italian, Irish and Jewish immigrants. In the late XX Century Jamaicans, Colombians, Nigerians, Haitians, Mexicans and native groups such as the Crips, the Bloods and the Hell Angels that were out of the social mainstream made up most trafficking networks.

The picture that arises from this short survey is clear. Many communities where coca and poppy have had traditional uses grow those crops. They have been isolated and/or excluded from the social mainstream in the countries where they are located. Cocaine and heroin producers and traffickers are also part of groups with very little loyalty towards the central state. Some are good old-fashioned criminals, but many are part of organizations that want to overthrow the government or to achieve autonomy or independence.

The arguments sketched in this essay (developed at length in Thoumi, 2003a) are consistent with the “new” international trade theory that stresses institutional and cultural elements as sources of the competitive advantage of a country (Landes, 1998, Porter, 2000, De Ferranti, Perry, Lederman and Maloney, 2002). This theory based on extensive empirical evidence shows that globalization and a large decline in transportation costs have weakened the importance of the traditional production factors (capital, labor, technology and natural resources) as determinants of the wealth of nations and the composition of a country’s exports. Successful development in the current world depends on a society’s capacity to increase the productivity of its factors of production. This in turn depends among other elements on the knowledge of and distance to large markets, public infrastructure, the quality of institutions, the work force’s discipline and the ability to deliver “just on time”. This theory agrees with arguments that institutional and structural weaknesses and cultural elements (values, beliefs and attitudes) determine illegal competitive advantages in illegal activities.

¹⁴ See for example Gugliotta and Leen (1990) and Scott and Marshall (1991) for documentation about the Sandinista and contras connections to the drug trade respectively.

IV. Policy implications of the competitive advantage theory of drug production.

This quick look at the illegal drug industry indicates that illicit drug production takes place because of issues relating to institutions, governance and culture. Profitability is a necessary condition for production and trafficking, but it is certainly not a sufficient condition for any of those activities. Production requires the presence of other factors besides high potential profits. The real policy challenge consists in identifying those factors and changing them to prevent the growth of the illicit industry.

Most anti-drug policies attack drug profits. These policies either aim to lower profits for producers and to increase risks and costs for all actors in the illegal industry. An important basic question is what results can be accomplished going after a necessary but not sufficient condition for the development of an illegal activity. A simple answer is that results depend on the policies' ability to eliminate the necessary condition. Unfortunately, current repressive policies do not have this capacity. Indeed, some anti-drug policies work at cross-purposes in this respect: they seek to lower the revenues received by peasants and increase the retail prices of cocaine and heroin raising profits at the retail end of the market. Policies aiming to achieve these goals can succeed only if they eliminate market incentives for production in every location where drugs can be produced. To do so it is necessary to establish and maintain indefinitely a very high level of repression in the presence of increased potential retail profits, an impossible task with the resources and technology available today.

Repressive policies are promoted by the United States, but prohibitionism is supported by an overwhelming majority of the countries and societies in the world. Indeed, it may be said that the world is prohibitionist. A list of prohibitionist countries includes today, the United States, Sweden, all Eastern European countries and those of the former Soviet Union, all Islamic nations, China, Japan and other South Eastern Asian countries, all South Saharan African countries and many Latin American and Caribbean Nations. A deviation from this pattern is found among are several Western European countries that want to deepen their experiments with harm reduction policies on the consumption side, and a few drug producing countries that have suffered the negative consequences of the increased influence of the illegal economy and organized crime. The deviance of the Western European countries is quite mild. Their efforts are in the direction toward a public health approach to drug consumption problems but none of those countries

advocate liberalizing drug production, much less a free, unregulated drug market. In this sense they support a less drastic form of prohibitionism.

Andean and other drug producing countries must face the fact that illegal drug profitability will continue during the foreseeable future. As noted, profitability is a necessary but not a sufficient condition for illicit drug production. In order to produce drugs there are other necessary factors such as an appropriate institutional environment and a culture that encourage individuals to take advantage of illegal market opportunities. This presents an interesting policy problem. In order to succeed through repressive policies, Andean countries must eliminate illicit drug profitability within their borders in the presence of external profitability. To achieve this goal, the level of repression necessary would be extremely high, so much so that it will be socially and politically unacceptable.¹⁵ Indeed, the level of repression required to achieve a particular goal is inversely proportional to the extent of the rule of law. Since the illegal industry locates itself in the countries and regions where the rule of law is weakest, it is precisely in those societies where repressive policies would have to be the strongest in order to achieve any result.¹⁶ Even in this case, it would be necessary to have uncorruptable law enforcement officials, otherwise the stronger the pressure the more opportunities for corruption and the lower the chances of success. Not surprisingly, drug policy success through repressive means in the Andean countries would require a large sacrifice in human rights and other policy goals such as sacrificing the environment, strengthening of government legitimacy in illegal crop zones, and long term stable governability.

An important lesson from the analysis of the competitive advantage in illegal activities is that as long as the rule of law in drug producing societies remains low, repressive policies will have to be very strong and will at best achieve short-term successes unless extreme repression is maintained indefinitely, a very unlikely scenario. This is why to guarantee long-term success it is necessary to establish the rule of law. In other words, the “drug problem” in drug producing countries is a structural, institutional and cultural, not a simple policy problem to be tackled with traditional policy prescriptions. The current policy debate is framed as a confrontation between “legalizers” and “criminalizers.” From the point of view of the Andean drug producing countries the real long-term issue is how to develop social behavioral controls and how to strengthen the rule of law. Without these, they will not achieve a long-term solution to the “drug problem.”

¹⁵ This is why in these countries some people clamor for international “legalization,” that is, for an external solution to their policy problem.

¹⁶ Putting this in simple terms, the level of repression required to control an illegal market in Norway is much lower than in Colombia.

The role of traditional repressive policies raises other important issues. First, to what extent current policies complement or conflict with each other or generate “unintended” consequences effects that neutralize the effects of other policies and second, whether these policies are complementary or will conflict with the social changes needed to achieve long-term success. An important issue is whether policies designed to produce some short-run results will conflict with the deeper changes required to achieve long-term success.

Current policies frequently conflict with each other and generate “unintended” consequences. For example, forced eradication tends to displace plantings to new areas. This, so called, “balloon effect” means that policy success is only local but that globally, eradication might have little or no long-term effect. Furthermore, if a “balloon effect” does occur, forced eradication results in a significant “unintended” environmental damage as more old native forest is destroyed to plant new illegal crops and in some cases, large migrations to other rural and urban areas where uprooted peasants settle. Forced eradication also has the “unintended” effect of weakening community loyalty to the state, and the displacement of peasants might increase the willingness of young people to join armed groups like FARC. Both of these are obstacles to achieve a long-term solution.

V. The evolution of anti drug policies in the Andean countries

Anti drug policies in the Andean countries have evolved in time and space. Drug policy changes have responded to the development and evolution of the illegal industry, the experience of past policies and the countries’ international relations, among other factors. Anti drug policies in the Andean countries are prohibitionist. Many argue that they have been imposed by the United States, but any detailed study shows a complex process full of nuances (Guáqueta, 2004). For over 400 years policies toward mind-altering drugs in the Andes were a domestic policy issue. Andean prohibitionist policies toward coca and chicha (a corn based fermented beverage) antecede by several centuries the international prohibitionist policies promoted by the United States and other countries.¹⁷

17 See for example Llano and Campuzano’s (1994) history of chicha in Colombia.

A. Traditional coca and policies

Coca use was widespread in the Andean region before the Spanish Conquest. It is not clear, however, whether it was generalized in the population or limited to the elite. During the Colony, coca was used to help exploit large mines (mainly silver) and haciendas but several groups opposed those practices mainly to protect the Indian population. Coca was used in religious ceremonies and many social occasions. Despite its common use, coca cultivation presented some serious problems. Coca grows in areas with endemic tropical illnesses that resulted in very high mortality rates. For example, coca workers used to supply the Potosí mines suffered an annual mortality rate of about 30% which led to the establishment of the *mita*, a forced labor system (Gagliano, 1994: ch. 2)

Until well into the XX Century coca was used as a food substitute in mining and farming. Coca does have many minerals and vitamins but they are unlikely to have compensated a deficient diet among peasants and miners. During the XIX and the first half of the XX Centuries coca chewing was the subject of political debate. Lobbyists for the landed aristocracy in Peru supported traditional coca uses but a progressive group that aimed to improve the Indians' standard of living opposed those uses. They had two main arguments: that coca allowed the government not to worry about the Indians' nutrition levels, and that coca use was an obstacle to incorporate the Indian communities into the Peruvian mainstream (Gagliano, 1994, ch. 6 and 7, Gootenberg, 1999). These progressive groups sought to industrialize coca, which meant to produce cocaine to compete with American and European pharmaceutical laboratories. This group, however, was opposed to the traditional coca uses by the Indian communities (Gootenberg, 1999).

Traditional coca chewing was a topic of debate during most of the XX Century. Important groups of the Bolivian and Peruvian elite opposed coca chewing and had no problem signing the 1961 Single Convention of the United Nations in which they agreed to eliminate coca chewing within 25 years after the convention was ratified. They also signed and the subsequent 1971 Convention on Psychotropic Drugs and 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances although the Bolivian government signed the 1988 Convention with reserves (see below). As noted, coca was included in schedule 1 that limits coca to medical or scientific research uses only. Therefore, it precludes any traditional coca use.

The status of coca in the UN Conventions has been a torn in the foot of the Bolivian and Peruvian Indian communities. They continuously complain that "coca is not cocaine"; that classifying coca, a nature given plant that

has been used for millennia in the Andes without significant negative effects on users, as a psychotropic drug is unfair. They argue that coca has many uses in the Indian cultures particularly in religious ceremonies, that coca is sacred and that the 1961 convention requirement that Bolivia and Peru eradicate coca from earth within 25 years placed an unreasonable restriction on the religious freedom of Indian communities (Rivera-Cusicanqui, 2003).

The confusing status of coca in the UN Conventions has allowed some policy makers to advocate the total eradication of coca from earth, exacerbating the Indian communities' distrust. For example, Pino Arlacchi, the Undersecretary General of the United Nations in charge of the drug control program unsuccessfully proposed in the 1998 United Nations General Assembly Special Session to set the goal of total coca and poppy eradication by 2008.

The Bolivian and Peruvian governments have created agencies to control and regulate legal coca markets, including the small coca exports to Coca-Cola.¹⁸ These agencies have not had, however, the needed budgets and managerial resources to control licit markets of coca or to prevent leakages of legally produced coca to illicit markets.

Colombian Indian communities are a much smaller proportion of the country's population than in Bolivia and Peru and were, and are, weaker and less organized than their counterparts in other Andean countries. Most were quickly assimilated into mainstream society during the Colony. Coca use was not widespread and by the 1940s it was limited to small areas where some Indian communities had survived. In contrast with Peru and Bolivia, Colombia did not export coca or developed a system to control the coca market. In the late 1940s the government had a strong campaign led by Public Health Minister Jorge Bejarano against chicha and coca. A main achievement of this campaign was the prohibition to pay part of a peon's salary in coca leaves, which was a tradition in some haciendas in Cauca Department (Thoumi, 1995). Despite this campaign, coca policy was never a significant policy issue, which it was in Bolivia and Peru.

B. Policy response to the development of the illegal cocaine industry.

Coca regulation in the Andean countries was a domestic policy issue until about 1970 when the illegal world cocaine market began to grow and coca, cocaine control became a main international relations issue involving

¹⁸ These ended in 2000 when Coca-Cola started to use a synthetic substitute.

foreign actors and substantial new policies were formulated. These evolved differently in Colombia as contrasted with Bolivia and Peru, reflecting the differences in the development of the illegal industry in those countries.

From the early 1970s to the mid to late 1990s the main Colombian policy problem was to confront drug trafficking. In Bolivia and Peru the main issue was how to deal with illegal crops and the peasantry involved in those activities.

Large Colombian criminal organizations (“cartels”) concentrated cocaine manufacturing and international trafficking and accumulated large fortunes. The growth of the illegal industry in Colombia has been associated with a lot more violence and the illegal income was a lot more concentrated than in Bolivia and Peru.

Any illegal industry requires a social support network to operate. The drug industry in poor countries needs strong links with the political establishment and is a key source of corruption. In the 1980s Peruvian guerrillas provided protection to the industry and obtained substantial funds from it. In Colombia both left and right wing guerrilla groups have profited from the illegal trade during the last 20 years and are today their main source of support. The links between guerrillas and drug trafficking have undermined the political agendas of subversive and counter subversive guerrilla groups and have also placed the armed forces at risk of corruption.

Anti-drug policies include a complex set of measures to attack various aspects of the illegal industry. In Bolivia and Peru alternative development (AD) programs have played a dominant role. These have been funded by international cooperation, mainly USAID and the United Nations. Other international donors, especially en the German Technical Cooperation Agency (GTZ), have also contributed. AD is an interesting case of attempting to learn by doing. These programs started as crop-substitution projects that sought other crops that could grow in coca producing areas. These proved to be insufficient to induce peasants to eliminate illegal crops. Programs then evolved into more complex ones that sought comprehensive development including infrastructure, public services, education, health, and other public services and community development. To complement these projects, AD programs have also included employment generation projects in regions that supplied migrants to coca growing areas. AD in Colombia played a secondary role until recently.¹⁹

The AD experience around the world indicates that these programs tend to displace illegal crops to other regions or countries. This effect has been discounted in practice and has not prevented the funding of new AD

¹⁹ The literature on AD is extensive. See Lee and Clawson (1993), Cabieses and Musso (1999), Vargas-Meza (2003), Renard (2001), Thoumi (2003a: ch. 11).

programs that in the best-case scenario, from a particular country's point of view, successful programs tend to displace crops to a different country (Renard, 2001, Clawson and Lee, 1993, Thoumi, 2003a).²⁰

Among the anti-drug policy arsenal in the Andean countries AD is the main and frequently the only carrot. All other policies aim to punish the illegal industry actors. These include: forced and "voluntary" eradication (this can be manual or through aerial spraying which is allowed only in Colombia); search and seizure of illegal laboratories and places where drugs are stored; interdiction, confiscation and destruction of illegal drugs and the chemical inputs used in their production; capturing and jailing industry actors and extraditing them to the United States; and confiscation and expropriation of assets accumulated by the illegal industry. Other possible carrots are programs to strengthen government institutions and agencies such as the police and the justice system.

These policies involve a broad range of institutions and individuals including the private sector. Cooperation is required from the financial sector, real estate companies, chemical products' manufacturers, importers and traders, lawyers, financial advisers, chemists, and in general, from anyone who has a contact with the illegal industry or the funds it generates. In the public sector it is necessary to coordinate the activities of myriads of agencies: security and intelligence forces; the judicial system; the armed forces and the police; the legislative branch and many ministries such as defense, agriculture, environment, etc.

Anti drug policies have had many difficulties and problems. First, they have been formulated within the context of a "war on drugs" mentality in which any weapon is good to fight an evil foe. This policy approach has not taken into account some complex contradictory policy effects. A case in point is aerial spraying in areas where AD projects are implemented. Aerial spraying, at times, has not been very accurate. In Colombia planes have had to spray from relatively high altitudes to avoid guerrilla fire. Shifting winds can spray herbicides over large areas beyond the illegal planting fields. Crop eradication increases coca and opium prices and generates incentives to establish new plantings in other regions. A further example is provided by the enforcement of the extradition treaty between Colombia and the United States in the mid-1980s that resulted in a narco-terrorist wave that weakened the state's ability to implement other policies.

Second, policy success requires a high degree of coordination among all state agencies involved that is likely to be beyond the capacity of the Andean

²⁰ This has been clearly the case in apparently successful AD cases in Thailand where poppy field moved to Myanmar and in Pakistan where they moved to Afghanistan.

countries. It is necessary, for example, to coordinate the actions of, among others, the army, the police, the judicial sector, security and intelligence agencies, the agriculture ministry, etc. In a few cases, the lack of coordination among the army, police and intelligence agencies in Colombia has resulted in confrontations among them that produced “friendly fire” victims.

Third, anti-drug policies have not been formulated as a result of broad based national policy consensuses. In fact, many of the actors whose support is required to achieve success have not participated in the policy formulation processes and are neither convinced of the policies’ convenience or effectiveness nor committed to their success. Not surprisingly, the implementation of many of these policies has been a source of corruption.

Fourth, the “war on drugs” context behind the policy formulation process implies that anti drug policies must be of the highest priority in the Andean countries. For many government actors anti-drug policies have had a low priority. Indeed, when a country has a myriad problems relating to poverty, inequality, guerrillas, economic crises, etc. anti-drug policies might not seem to be too pressing and their implementation becomes lax. This was the case of Colombia during the 1970s and early 1980s.

Fifth, anti-drug policies cannot be evaluated using common cost-benefit methodologies developed by economics and other social sciences. This seems a contradiction, but from the perspective of the “war on drugs” it is not because every anti-drug policy is just a weapon whose effects contribute to the war effort. If a policy has some negative effects, they are not attributed to the policy itself but to what is causing the war, that is, to the existence of illegal drugs. Some policy effects might be undesirable and unfair but they are just “collateral damage” justified given the imperative to fight a great evil. Therefore, the benefits generated by the policies are always larger than their costs and traditional evaluation methods that can be used to choose the least costly and effective policy simply cannot be contemplated because the evil of drugs has to be fought with all weapons available. Within a “war on drugs” mentality policy evaluations can be used to improve the policy efficiency to attack drugs, not to question the use of the weapon itself or the war strategy. This is why current policy supporters argue that “there is no silver bullet” but policies would succeed if they are all applied simultaneously.

Commonly used policy success indicators reflect the impossibility to evaluate anti-drug policies. Indicators such as the number of sprayed hectares, the number of trafficking planes neutralized, the weight of seized drugs, the number of seized and destroyed laboratories, the number of extradited traffickers, and the like are the most commonly used indicators of policy success. These are similar to the number of dead and captured enemies in a war, but they provide little information about the policy effect on prices,

purity and availability in illegal drug markets or about the policies' effect on long and medium-term drug supply and demand.

The impossibility to evaluate policies is a reflection of their moral foundation, and has a corollary in the impossibility to debate them with some of the main policy critics who use closed thinking models, that provide predetermined answers that explain illegal drug phenomena. These critics reject all empirical evidence that contradicts their models. The following two examples illustrate this point. Commenting on the relaxation policies toward drug possession in the United States in the mid 1970s, Escobedo (1999: 136) asserts that this policy change is "explained" by the development of the "sin semilla" marijuana variety that was cultivated hydrophonically and generated large profits in the United States. This author's point is quite simple, as long as most marijuana was imported, possession laws were very tough but when a new variety developed a successful import-substitution industry, the laws changed to protect the new industry. This argument is "obvious" to many who "know" that drugs increase the United States GNP and wealth because otherwise, why would the United States prohibit drugs?

De Rementería (2001: 16) justifies the development of illicit crops in the Amazon jungle as "a rational response to the agricultural and rural crisis (in the Andean countries) caused by developed countries' protectionist agricultural policies that result in product prices below real production costs." Without defending American and European agricultural subsidies, it is important to highlight at least a few points that are dismissed by the author in question: 1. Agricultural subsidies in developed countries have existed for a very long time and are not statistically related to the expansion on illicit crops in the Andes. 2. Illicit crops in Colombia are located in places that are very distant from national markets and are difficult to access. This is a rational choice of illegal planters to avoid detection and make law enforcement difficult. Any licit agricultural product from those regions would have very high transportation costs to any domestic market. 3. The development of illegal plantings is related, among other factors, to weak state presence, violence generated peasant displacements, land concentration by drug traffickers (that is, the development of the illegal cocaine industry itself contributed indirectly to coca expansion), and crisis in other industries. 4. The collapse in international coffee prices was due to the large expansion of the crop in Vietnam and was a main cause of peasant migration from traditional coffee growing regions to the coca and poppy growing areas in Colombia.

These two examples show that the complexity of the drug phenomena and that the empirical evidence is dismissed by authors who appeal to an

“explanation” that is consistent with a model developed following a particular ideology. In these cases policies cannot be evaluated either because the closed model already has evaluated them.

C. Policy evolution during the 1990s.

During the 1990s the Andean illegal drug industry and the policies against it changed substantially. The old Medellín and Cali “cartels” were dismantled in Colombia and their leaders were killed or jailed. Some of them continued doing business from jail but they lost market share. The industry became fragmented and a large number of new “cartelitos” that deal in smaller quantities appeared. At the same time, Colombian traffickers lost market share in the United States to Mexican organizations that displaced them. Mexicans started as collaborators that smuggled the Colombians’ cocaine into the United States but they developed their own distribution networks and Mexican “cartels” control today the West Coast cocaine market in the United States and they are large players in the illegal industry. Today a significant share of Colombian cocaine exports is sold in Mexico at significant lower prices than in the United States.

The illegal industry’s fragmentation generated incentives to grow coca to avoid the large costs and risks faced by small trafficking organizations in purchasing trips to Bolivia and Peru. Fragmentation also resulted in incentives to grow poppy and heroin whose price per kilo is much higher than cocaine’s and in the establishment of small cells in the United States and Europe to sell drugs in smaller amounts at much higher prices..

One of the most dramatic changes in the illegal industry during the 1990s was the change in the geographical location of the illegal plantings. The US Department of State (2003: II) estimates that in 1990 Peru had 121,300 coca hectares, Bolivia 50,300 and Colombia 40,100. In 2000 there were 136,200 hectares in Colombia, 34,200 in Peru and 14,600 in Bolivia. These data include legal coca in Bolivia and Peru, approximately 12,000 hectares in each country. According to this source, Colombia had less than 40,000 hectares until 1993. By 1995 this figure increased to 50,900 and grew substantially in the following three years to over 100,000 in 1998. Coca plantings in Peru remained at high levels until 1995 (115,600 hectares), declining to 94,400 in 1997 and 68,800 in 1998. This trend became accentuated and the number of coca hectares declined to 34,200 in 2000. Coca plantings in Bolivia were relatively stable between 1990 and 1997 fluctuating between 50,000 and 45,500 hectares. From 1998 on this figure dropped dramatically to 14,600 in 2000.

The sharp drop in coca plantings in Bolivia and Peru is generally attributed to those countries repressive policies. The Peruvian success is attributed to the “Air bridge denial strategy” that neutralized trafficking airplanes.²¹ According to a *power point* presentation made by the Peruvian delegation to the Commission of Narcotic Drugs in Vienna in 2003, the “air interdiction program began in 1992 but was interrupted in 1993 and it was reinstated only in late 1994 with full support of radar platforms (AWACS and P-3 Orion)”. Furthermore, “in only 6 months the program blocked air traffic from the Colombian (cocaine) producing zones” and “this was the main transportation means to send coca base to Colombia where it was transformed into cocaine. When this route was cut, the drug trafficking industry decided for this and other reasons, to promote coca plantings in Colombia. This reduced the coca demand and coca prices in Peru.”

This is a nice policy success story. However, when one looks at all available data in more detail, a different picture appears. First, the evidence about illegal coca growth in Colombia provided by independent researchers shows that coca plantings began to grow substantially before 1995. Uribe (1997: 88) shows that by early 1995 Colombia already had about 80,000 coca hectares. This shows that the fragmentation of the Colombian “cartels,” that started with the government’s fight against the Medellín cartel in 1989, and the growth in the Colombian coca supply played an important role in the Peruvian coca crop decline. Furthermore, according to official Peruvian air force data, they began to neutralize planes in 1990.²² These data show three planes neutralized in 1990, eleven in 1991 and 1992, twenty-five in 1993, fifteen in 1994 and twenty in 1995. These figures dropped substantially in the following years: three in 1996, 10 in 1997, zero in 1998 and 1999, two in 2000 and one in 2001. According to these figures, the attack on air traffic does not appear to have had a significant effect on drug production and trafficking. In fact, coca plantings did not decline between 1991 and 1995 when most planes were neutralized.

United Nations data show that coca prices in the Upper Huallaga Valley (in constant 2000 dollars) were very low in late 1989 (\$0.92 per kilogram) when the Colombian government’s war against narco-terrorism was at its highest point. These prices increased in the following year and remained between \$2 and \$3 per kilogram until 1995 when they fell again to \$1.24

21 Ronken, Ledebur and Kruse (1999) describe in detail this policy without sharing the view of its success.

22 These data were obtained directly by the author from the Peruvian Air Force in December 2002. The Peruvian Air Force has four categories of neutralized airplanes: those who are seized in land, those that are shot down in the air, those that are destroyed in land and those self-destroyed by traffickers.

(UN-ODCCP, 2001: 73). Coca prices bottomed out in 1996 (\$0.66 per kilo) and 1997 (0.77 per kilo) and recovered quickly during the following years to levels comparable to the highest ones of the 1990s, reaching \$2,70 per kilo in 2000 (Ibidem).

These production and prices data are consistent with interpretations provided by Rospigliosi (2000) and Dammert Ego-Aguirre (2000) who have documented presidential adviser Vladimiro Montesinos' participation and control of drug trafficking networks in Peru in the 1990s. Traffickers who paid "tolls" succeeded and those who did not were shot down. Besides, some planes could have been neutralized to show the governments' commitment to the "war on drugs". In any case the plane neutralization policy did not have any effect on coca production or prices between 1990 and 1995.

Coca cultivation in Bolivia remained stable during the 1990s until 1998 when the newly elected government of General Banzer, promoted a campaign led by the committed vice-president Jorge "Tuto" Quiroga who instituted an aggressive manual coca eradication program. This policy broke a tradition of negotiations with peasant unions ("*sindicatos*"). In theory, forced eradication was to be accompanied by substantial AD programs. Quiroga's policy was very successful as it achieved an unprecedented decline in coca plantings but as will be seen below, its long-term sustainability is highly questionable.

The expansion of the Colombian coca plantings was not the result of Bolivian and Peruvian policies. As noted, small "cartels" have strong incentives to purchase coca paste and cocaine base locally. Besides other factors like the left wing guerrillas' need of funds after the loss of Soviet and Cuban subsidies after the collapse of socialist economies and the development of paramilitary groups that also needed funds contributed to the fast coca plantings expansion.

By the end of the 1990s the Colombian illegal drugs industry had experienced remarkable changes. The Colombian traffickers had lost a significant part of their market share in the United States. Drug trafficking had a lot more actors: a large number of small trafficking organizations were operating and the illegal industry was closely linked with guerrilla and paramilitary groups. Besides, heroin exports had been developed and new markets for cocaine had been opened in Europe, the former Soviet Union and South America. Today Brazil is the second largest cocaine market measured by consumption volume. The Colombian illegal industry experienced an important vertical integration process and by the end of the 1990s its plant based inputs were almost all domestically grown.

The Bolivian and Peruvian illegal industries also experienced important changes. In both countries cocaine manufacturing grew and local traffickers developed links with Mexican "cartels" bypassing Colombian trafficking

organizations. Their illegal industries also became more vertically integrated despite the great decrease in coca production.

The sharp decline in coca plantings in Bolivia and Peru did not lower cocaine availability or increased retail prices in the United States and Europe. Official United States government data show that during the 1990s coca plantings in the Andean countries declined from 211,800 hectares in 1990 to 185,000 in 2000 (United States Department of State, 2003:II-16 y 17). During this period there was however, a significant technological change and coca field productivity increased substantially. The same source indicates that in 1990 there was a potential coca leave output of 330,000 tons, a figure that increased to 664,000 tons in 2000 (United States Department of State, 2003:II-17 y 18).

D. Recent Industry and Policy Evolution

During the first years of the XXI Century the illegal industry and the policies against it continued evolving. These changes reflect the deep differences and lack of consensus about drug policies among and within the Andean countries as well as the policies' ineffectiveness and changes in the international environment after September 11, 2001 that produced stronger external pressures on the Andean countries and a commitment by the United States to fight terrorism.

All Andean countries have severe unresolved internal conflicts and have social groups that feel exploited and excluded from power. Some argue that the use of coca in Indian communities in Bolivia, Colombia and Peru is a symbol of cultural identity and resistance to a foreign invader (Vidart, 1991: 1). The large uninhabited areas allows the persistence of a conqueror's mentality to the point that the "conquest of the 'other' has not been completed" (De Roux, 1990: 11).

As noted, during centuries coca policy in the Andes was a domestic issue but the development of the illegal industry has internationalized the issue and through it, the domestic social conflicts. The involvement of subversive and counter-subversive groups in the illegal market and the developments after the September 11 events that led to those groups being declared terrorists by the American and many European governments have reinforced repressive anti-drug policies.

1. The Developments in Colombia

The Pastrana administration (1998-2002) in collaboration with the United States government formulated "Plan Colombia" that originally included funds to implement a series of policies against drugs. The United States government restricted the use of those funds to fighting drugs, preventing their use against

subversive and counter-subversive organizations. This plan included traditional policies like AD, programs to strengthen the justice system, the technical level of anti-money laundering state agencies, the police and the armed forces. The most controversial policy funded by “Plan Colombia” is aerial spraying of coca and poppy fields. This policy is illegal in the other Andean countries where it has not been implemented. The widespread use of aerial spraying reflects the Colombian state’s inability to control its territory and to develop a manual eradication program, and the “war on drugs” mentality behind anti-drug policies that tolerates any action irrespective of its possible social and environmental costs. This attitude was reinforced with the formulation of Plan Patriota under the Uribe administration to expand the territorial control of the state and fight guerrillas and paramilitary organizations. Indeed, the Colombian government discourse asserts that aerial spraying is an effective policy against narco-terrorist groups that have absolutely no legitimate grievance. One of the main driving forces behind this policy is the need “to cut the funding of the guerrillas and paramilitary groups that have caused extraordinary damage to society” (Restrepo, 2004).

Aerial spraying has been considered a great success by the American and Colombian governments. They estimate that it resulted in a decline of coca plantings of 25% in 2003. After the United States government classified guerrilla and paramilitary groups as terrorists “Plan Colombia” funds could be used to fight them. Aerial spraying is a blunt weapon that frequently destroys legal crops and may have negative health and environmental effects. The implementation of this policy in Colombia presents several unsolved issues. First, because of the on going armed conflict, the herbicide used (glyphosate widely used and known commercially mainly as roundup) cannot be applied following the manufacturer’s recommendation. Since the herbicide is formulated to be sprayed from very short distances, its use in aerial spraying requires the addition of a “fixer” that adds unknown health and environmental effects (Sherret, 2005). Frequent reports also indicate that the concentration of glyphosate used is substantially higher than the one recommended by the US Environmental Protection Agency, although this fact cannot be corroborated, it would not be surprising given the “war on drugs” and anti-terrorism mentality that has influenced anti-drug policies in Colombia.

Second, many reports claim that aerial spraying has destroyed other crops, that the herbicide has been blown by winds into Ecuador, and that it has had significant negative effects on fauna and human health. In Colombia there has been a debate over the health impact of aerial spraying. The people’s ombudsman’s office and several NGOs have produced several reports presenting evidence of those effects. The American government in turn financed a study by a well-known Colombian toxicologist that used the clinic

histories of 21 patients who claimed to have been impacted by aerial spraying. Unfortunately, the doctor who collected these data could not be located. This study showed that none of the claims was valid because the patients were infected but not intoxicated and was used to reject the many claims of several thousand peasants, of the Ecuadorian government, NGOs and the people's ombudsman.²³ The critics of this policy and the governments' responses have focused on the effects on peasant health (Revelo-Calderón, 2001, Defensoría del Pueblo, 2002). Unfortunately, the debate about aerial spraying has focused only on direct health effects which, as the Colombian government asserts, are likely to be minor and less important than those generated by the peasants' misuse of many other chemicals, defoliants and herbicides.²⁴ Other important effects such as the displacement of people and plantings and the loss of fauna and flora could be more important but have not received any significant attention.

Third, aerial spraying is likely to have strong short-term results but it is also likely to conflict with long-term solutions to the drug issue. Two of the strongest feelings expressed by the citizenry in coca and poppy growing regions are their abandonment by the central state and their lack of loyalty to it. State presence by aerial spraying is not conducive to building the loyalty to the state and the identity feelings as a member of the broad Colombian society required to achieve long-term success against illegal drugs.

Fourth, spraying has brought new actors to the Colombian conflict. These include border Ecuadorian communities and that country's government, several international businesses that provide services and materials to spray, and NGOs interested in the environment. This policy increases the degree of internationalization and complexity of the Colombian conflict.

Fifth, aerial spraying appears to be losing its edge as an eradication policy. Sources close to the Colombian and American agencies involved in aerial spraying and recent journalist reports indicate that there are several coca varieties that have developed resistance to glyphosate. This could be the result of a natural reaction or research done by the illegal industry. These sources also indicate that there are talks about substituting more toxic herbicides which no doubt, will have greater health and environmental effects. Indeed, in 2003 there was a decline of 15,000 hectares of illicit crops. The number of sprayed hectares was however, much larger, somewhere around 120,000 resulting in a cost per eradicated hectare of about \$8,000. These

23 It is possible, however, that infections arise as secondary effects of aerial spraying. It is acknowledged that spraying causes minor rashes and people scratches can result in infections.

24 Vice-president Francisco Santos, for example, made this claim at the seminar "La Política de Desarrollo Alternativo y su Modelo Institucional" at the Universidad de Los Andes on September 8, 2004.

are quite high compared with those of possible AD programs highlighting the inefficiency of aerial spraying as an eradication tool (Vargas, 2004).

Expropriation of traffickers' assets has been one of the anti-drug policies' weaknesses in Colombia. Properties were seized but the expropriation process was extremely cumbersome, lengthy and rarely succeeded. The increased awareness about the participation of the main actors of the armed conflict in the illegal drug industry was a great incentive to change the laws to facilitate expropriations. This was achieved with a new law in 2002. It is remarkable that finally in 2003 the state succeeded expropriating many buildings and land of Gonzalo Rodríguez-Gacha, a Medellín "cartel" member killed more than 12 years earlier. This development opens up the possibility to promote a land reform program distributing expropriated lands.

Extradition to the United States has been a policy used in a remarkably liberal fashion by the Uribe administration. In the 18 years before Uribe took office in August 2002 Colombia had extradited less than a 100 traffickers. In the first two years of his administration Uribe extradited more than 170 including some of his youth buddies. Extradition is a strong punitive policy and according to its supporters, highly dissuasive even though there is no real knowledge about the magnitude of this effect. Today the Colombian government is facing an interesting dilemma: it is trying to develop peace negotiations with paramilitary groups but the United States government has requested the extradition of several of the main paramilitary leaders. This has become a key obstacle for any peace process in Colombia. A similar situation would arise in case of peace negotiations with the main guerrilla groups. The extradition agreement with the United States has made this country's government an integral part of any peace process in Colombia.

Linking of terrorism and the illegal drugs industry by the United States has led it to harden its position against money and asset laundering. In collaboration with the Colombian government the United States has made efforts to control the parallel dollar-peso market and particularly the so called "*peso brokers*". This effort has resulted in significant expropriations of financial assets, including those of some Colombian entrepreneurs who made their wealth in legal activities but had purchased parallel market dollars of questionable origin. This policy is likely to limit the parallel market and induce Colombian capitalists to increase the use of the official market.

The complexity of anti-drug policies has increased substantially and they now require greater coordination among government actors in charge of policy formulation and implementation. Aerial spraying, for example, requires close coordination with AD programs to provide licit options to sprayed peasants and to avoid spraying licit AD crops. Policy coordination is today more difficult than in the past because policies are more complex, they involve

more actors with very diverse interests, including foreign public and private organizations. Unfortunately, policy coordination is a weak link in the drug policy chain. Different institutions have different goals and there are frequent turf wars among them. The army and police, for example, fight to take some anti-drug actions and at times to “recycle” illegally seized drugs. In some incidents army and police units have battled each other to control a batch of seized cocaine.

Despite the apparent success against illicit crops, there are reports that indicate that coca and poppy fields have become common in other rural areas of the country. Most new plantings are small and easy to hide. It appears that coca now grows mixed with other crops in the old coffee growing regions and that a coca variety that grows in the shade and is harder to detect has been developed. Mr. Walters, the head of the US Office of Drug Control and Crime Prevention (ONDCP) is however quite optimistic about developments in Colombia even though retail cocaine prices did not increase but actually declined somewhat in the United States in 2004 while retail market purity remained about the same. The official ONDCP explanation is that drug traffickers are selling stocks they kept in case of shortages and that retail cocaine prices will rise soon.²⁵

The ONDCP explanation might seem plausible to many, but it is highly questionable. At issue is whether drug traffickers keep large stocks of cocaine or heroin. Illegal industries have very strong incentives not to keep stocks that can be seized and destroyed by law enforcement agencies or competing traffickers. Indeed, their practices are similar to “just in time” practices in the legal sector. It can be argued that after the 1999 and 2000 bumper poppy crops in Afghanistan, the Taliban that controlled the country, allowed traffickers to keep large opium and heroin stocks to prevent prices from falling and banned poppy plantings but not opium and heroin trafficking. There is no question that when there is a symbiotic relationship between the state and trafficking organizations, these can have an inventory policy designed to keep prices high and speculate keeping stocks. It is difficult however, to find a reason for traffickers in the United States or Colombia to

²⁵ In the middle of August 2004 reports about cocaine prices and the success of eradication were conflictive. ONDCP director John Walters in an State Department file (<http://usinfo.state.gov/xarchives/display.html?p=washfile-english&02004>) expressed great optimism, indicated that cocaine prices had risen somewhat in some European markets and that he had intelligence that allowed him to forecast rising prices and lower cocaine purity in the United States markets within the next twelve months. Ted Galen Carpenter, vice president for defense and foreign-policy studies at the Cato Institute in a National Review comment (<http://www.nationalreview.com/comment/carpenter200408120826.asp>) interpreted Mr. Walters’ claims as more of the same old news that promises success just around the corner and argues that coca crops are growing fast in Bolivia and Peru and that productivity has increased, eliminating the possibility of a retail cocaine price increase in the United States markets.

keep large stocks. In the near future it will be clarified whether aerial spraying has really had an effect on cocaine availability and purity in the main international markets.

2. The Peruvian Case

The political and institutional infrastructure required to formulate and implement policies in Peru during the last two decades has been severely weakened. After the catastrophic populist government of Alan García, the Fujimori administration stabilized the economy but its response to the existing political crisis did not aim to develop stable democratic institutions. Fujimori implicitly accepted the position of a group of the military that asserted that Peru was not ready for a democratic system and that the system based on the country's traditional parties had been responsible for the deep crisis of the late 1980s. Supported by the military forces, Fujimori established a government that can be characterized as a civil dictatorship that attempted to perpetuate itself backed by the military. To achieve this goal it used several types of cooptation and corruption for which the control of the illegal drug industry was instrumental.

The greatest challenge faced by the current Toledo administration is the construction and reconstruction of democratic institutions some of which had been destroyed during the previous regime and others that had never developed. The nature of anti drug policies and foreign technical assistance play a key role in this process and can either promote or compromise the country's response to the challenge it faces.

At the start of his government, President Toledo made an effort to achieve a national consensus about state policies; that is, a set of broadly accepted policies that could transcend a particular administration and have long-term continuity. A policy document signed by all political parties was agreed on by July 2002. It includes twenty-nine policies grouped in four categories. The twenty-seventh policy refers to "eradication of illegal drugs' production, traffic and consumption" and asserts "our commitment to adopt an integral anti-drug policy based on ethical and social values. It will have educational, economic, commercial, punitive, and public health control mechanisms. We also commit ourselves to generate and support efficient alternative development programs to produce profitable goods including those coca leaf based; and interdiction systems to eliminate illegal drug traffic and campaigns designed to eliminate drug consumption. We will also take care of the needs of the populations most affected by drug trafficking and of the health of those affected by drug consumption".

This was a broad general declaration of principles that could be signed

by all political parties. Unfortunately, it has not allowed the formulation and implementation of a state anti-drug policy. To begin with, this policy conflicts with other state policies. The eighth policy for example, seeks to achieve “political, economic and administrative decentralization to promote an integral, harmonic and sustained development.” The government has encouraged decentralization of many activities to increase regional autonomy. In the Peruvian context this has become an obstacle to a coherent anti-drug state policy because regional and local governments tend to have policies that conflict with those of the central government particularly in regions where coca growers are the basis of the electorate.

The government has tried to formulate a coca law to regulate and control licit coca production but has failed to achieve a consensus about it.²⁶ During the last few years coca growers have frequently mobilized demanding the legalization of all coca plantings and the industrialization of coca. A group of “cocalogos” that provides advice to peasant organizations and argue that coca cannot be industrialized as long as it is in the United Nations Single Convention Schedule 1. A few experiments in the past have indicated that coca might have several licit uses. This include coca toothpaste, chiclets, some liquors, and as a cellulose source in paper making. They also argue that coca chewing could be improved if coca is made into pellets mixed with other ingredients that would facilitate the extraction of cocaine and other alkaloids without using lime. Coca tea could also be improved using high quality coca to develop a “coca gourmet” market. All these possible uses would develop market niches that their supporters expect could result in better coca prices. Unfortunately, there are no real market studies or estimates of possible coca requirements to determine the relevance of these hypothetical coca uses. The development of these possible alternative coca uses could be encouraged, but that will not contribute significantly to “solve” the “coca problem”. First, any educated guess about the magnitude of possible legal coca demand indicates that it might not be very large.²⁷ Furthermore, coca industrialization proponents don’t seem to realize that legal coca prices

26 As of September 2004 there were nine different coca law projects drafted by various groups in Congress. The government was also working on its own project. The prospect for any law to be approved in the next few months does not appear to be good.

27 Cabieses (1996) explores several possible coca uses and concludes that even though coca could have many uses, the total possible demand would be small. Furthermore, interviews of this author with two former ENACO managers in Lima in December 2002 produced “back-of-the-envelope” estimates of 40 hectares for all the coca used to satisfy the demand for coca tea in Peru. There are reports that USAID is developing an estimate of the coca requirements for chewing and other licit uses but the report is not yet available although researchers close to USAID-Lima guess that the total figure would be under 9,000 hectares.

would be low relative to those of the illegal sector. Coca prices are a very small share of retail cocaine prices, about one-half of one percent in the case of American street prices. If needed, traffickers may easily increase coca prices several fold to compete with any legal coca industry demand, without significantly affecting profits. In fact, only if coca is used to produce illegal cocaine it can have “just and fair” prices desired by peasants and their supporters.

During several centuries, until 1961, coca production was legal. Its traditional consumption was widespread in some regions, so much so that it was even included in some lists of needed staples subjected to price controls. Despite coca being well known and used, its only significant industrial use was as an input to produce cocaine. This is a good indication that most likely, there are no real good industrial uses of coca unless some dramatic technological change takes place. Besides, the inclusion of coca in the UN schedule 1 does not preclude its use once cocaine is extracted from it, as it is the case with “Coca-cola”. The inclusion in schedule 1 only means that coca cultivation has to be controlled and that its uses regulated to make sure that cocaine does not enter into any possible product. The point is that coca advocates, “cocalogos” and coca growing peasants want to free coca from those constraints to be able to sell in a free market without having to answer for coca sales to drug traffickers.²⁸

During the last year peasant protests and marches have become increasingly frequent and have become more organized. The government has detained several coca growers’ leaders and negotiations with peasant groups have not advanced. In the meantime, coca plantings are increasing and available reports indicate that they are spreading across the country. There are also indications of a Shinning Path recovery and possibly links of that organization with the Colombian FARC. All these developments show an increasingly complex and unpredictable situation.

3. The Bolivian Case²⁹

As mentioned above, the Banzer administration that took over in August 1997 implemented “Plan Dignidad” committed to eliminate the drug

28 Opium poppy is also in schedule 1 and no country has argued that this has been an obstacle to produce licit medicaments like morphine and codeine. In fact, the United Nations has developed and oversees a system that assigns legal opium production quotas to several countries.

29 This section uses some material published in Thoumi (2003b).

“scourge” (República de Bolivia, 1998).³⁰ The plan had four main aspects: coca eradication, drug interdiction (mainly laboratory destruction), some anti-money laundering measures and a program of drug addiction treatment and prevention. The plan’s implementation had strong support of the American Government and was concentrated on forced eradication. According to the American Embassy, the emphasis on eradication was justified because Bolivia did not have large trafficking organizations and illegal drugs’ exports were made by small family groups.³¹ The small size of the political and economic elite and the large illegal drug revenues make Bolivia very vulnerable to drug traffickers’ political and economic influence. Besides, it is likely that Bolivians have gained market share in the world’s illegal cocaine business in recent years. First, coca plantings in Bolivia had a large decline in 1998 and coca prices in Peru increased substantially. This suggests that Bolivian traffickers or criminal organizations with Bolivian participation substituted Peruvian for Bolivian coca. Furthermore, in mid 1999 Marino Diodato, an Italian, official of the Bolivian army married to a niece of General Banzer, was indicted on cocaine charges. The indictment also claimed that Mr. Diodato was part of a large international trafficking network linked to the Italian Mafia and Camorra.

By 2000 “Plan Dignidad” had achieved a remarkable success that appears hard to sustain in the long-run. The United States department of State (2004) reports a sustained increased in coca plantings during the last four years: 14,600 hectares in 2000, 19,900 in 2001, 24,400 in 2002 and 28,450 in 2003. Journalistic reports also indicate that coca plantings have spread beyond the traditional growing areas of Chapare and Yungas.

The forced eradication program caused a substantial decline in peasant income and spanned a series of protests, some of which have been violent. Economic crises in Argentina and Brazil, two countries that have been important markets for products of AD programs, and the sharp drop in coffee prices caused by large increases in Vietnam’s production, also contributed to the peasant income fall.

Forced coca eradication at a time when AD programs were facing deep problems generated a sharp peasant reaction that gained momentum. Beginning in April 2000 there were frequent confrontations between the government and peasant confederations that were demanding an end to the forced eradication program and other measures against drug trafficking. To end the protests the government signed a few agreements in which it

30 “Plan Dignidad” was the brainchild of Vice-president Quiroga, whose small party was a member of the coalition that took Banzer to power.

31 Author’s interview with American Ambassador Donna Hrinak in La Paz, April 1999.

committed itself to unrealistic measures. At the same time, coca leaders who were members of Congress led a strong political opposition to eradication. Support for the government within Congress was sufficient to get Evo Morales, the main cocalero leader, expelled from Congress in early 2002. This measure proved to be very costly for the government as it raised the popular support for Mr. Morales who became a serious presidential candidate.

The 2002 election was remarkable. Gonzalo Sánchez de Lozada was elected with only 22% of the votes. Evo Morales was a surprising second and two other Indian candidates, Felipe Quispe and Felipe Flórez obtained significant support, exceeding the votes of several traditional parties. These three Indian candidates controlled 50% of Congress which led Evo Morales to proclaim that he was going to govern from the streets.

Coca is not the only issue behind peasant protests. In some regions the lack of peasant land access is the main grievance. The peasant agenda also includes other issues such as education, health services and public utilities. Coca, however, is a catalytic issue for the peasant movement.

Peasants continued protesting, blocking highways and expressing grievances. These increased the pressure on Sánchez de Lozada who was forced to stop the forced eradication program in early 2003. He even considered to allow every peasant family to have a small coca field, a policy that could not be implemented because American pressures.

Coca has given power to the Bolivian peasantry for the first time in their history and they have learned how to use it. New peasant protests developed in opposition to a possible agreement between the Bolivian and Chilean governments to build a pipe to export to the United States. These protests continued *in crescendo* until Sánchez de Lozada was forced to resign on October 17, 2003. The presidential succession followed the Constitution and vice-president Carlos D. Mesa took power. In Morales' (2003: 12) words: "Bolivians experienced a great revolt. After been humiliated for more than 500 years, what happened in September and October shows that the reason of the people has prevailed and has begun to defeat the empire's gun. For many years we have lived the confrontation of two cultures! The culture of life represented by Indian peoples and the culture of death represented by the west."

Morales continues: "This uprising of the Bolivian people was not just against gas and hydrocarbons but against a set of grievances: discrimination and marginalization, but fundamentally against neoliberalism's exhaustion. Neoliberalism is responsible for the shedding of the blood and uprising of the Bolivian people. October 17 is the day of the Bolivian peoples' dignity. That day we began to tear down the symbol of neoliberalism represented by Gonzalo Sánchez de Lozada; we started to defeat the symbol of corruption and the political mafia. That day the people reacted timely to say with Sub-

Commander Marcos: ‘it is enough!’ enough of policies of famine and misery. This October 17 marks for us the beginning of a new building stage in which we will confront egotism and individualism. From peasant and Indian communities, from the barrios, we will build other life experiences based on solidarity and reciprocity and the distribution of wealth concentrated in few hands. This is the great task that confronts us after the great uprising of this great Bolivian people”

But there is more: “I want to tell you the dream of the Bolivian leaders, our task at this time is to strengthen this anti-imperialist sentiment, to stop the American aggression against Cuba, against Chávez. We want a great summit with Fidel, Chávez and Lula to tell them: ‘We are in front of American imperialistic aggression.’ We want to organize a summit accompanied by our sister Rigoberta Menchú, Adolfo Pérez Esquivel, and other social and labor union leaders and personalities. A great summit to tell our peoples: we are joined together to defend humanity. Because we do not have any other option: to defend humanity we have to defeat the system, we have to defeat American imperialism.” Evo Morales is today a very strong candidate for the 2007 Bolivian presidential election.

VI. Challenges and issues related to specific policies

A. Alternative development (AD)

As noted, above, AD is the main carrot in the anti-drug policy arsenal and started following a simple crop substitution approach whose basic idea was to find a crop that could be produced by coca and poppy growing peasants to sustain their families. This proved insufficient and AD projects have evolved into complex programs that aim to “substitute a legal economy for an illegal one.”

AD programs and projects face many challenges and obstacles. The following are among the most important. The first problem is to find a suitable crop to substitute for coca or poppy. Most, if not all possible crops, are not indigenous to coca growing regions. These tend to have several adaptation problems: they exhaust the soil after one or a few crops and they tend to develop plagues that are hard and costly to control. These crops require technical assistance, the development of marketing systems and various types of food processing plants. Different crops require different infrastructure, technologies and labor skills alien to the peasants.

For AD to succeed it is necessary to incorporate coca and poppy growing regions into the mainstream economy but successful AD crops face a lot more competition than coca and poppy. As noted, coca and poppy grow in very few places while legal crops grow in many regions and countries.

A second, basic problem is that AD projects fight market forces. They obviously have to compete with profitable illegal crops, but they also must compete with legal ones. If one wanted to develop a hearts of palm project in Colombia, for example, one most likely would not choose the coca-growing region in Putumayo to establish it. In fact, if it weren't for the existence of coca plantings, there would not be funds available for projects in Putumayo. It must be stressed that AD projects are not in effect development projects but rather, development counter projects designed to eliminate an existing profitable but illegal project.

As counter projects, AD projects have specific challenges. First, in any rural development project it does not matter what is produced or traded. What matters is the internal rate of return of the project. For example, in an agricultural project it does not matter if peasants switch products as long as the new products are profitable; when a highway is build, it does not matter what kind of goods are carried by the trucks that travel it. In the case of AD, it is important to make sure that peasants do not switch back to illegal crops and that trucks do not carry cocaine or chemical products used in refining it. Second, as a counter project, AD has to prevent possible migrations to coca and poppy growing regions of people who would like to engage in those illegal activities. For this reason, AD projects have included employment-generating programs in regions from where migrants are likely to move to illicit crop zones. Third, AD projects do not end as long as there is a threat of illegal crops coming back. Even if an AD projects succeeds, it is necessary to continue monitoring that region to make sure that peasants do not go back to cultivating illegal crops. This is particularly important when AD crops fail or their prices fall. Fourth, AD programs frequently constitute the main policy intervention in a country's rural sector. AD funds are almost always provided by foreign donors and are free to the government and peasants where illicit crops are located. In the Andean countries AD has frequently provided the main source of subsidized funds to the rural sector. In the case of Bolivia, for example, Chapare, the main coca-growing region has the best infrastructure and public services among all rural regions of the country, most of it built with AD funds. This presents a dilemma for peasants who realize that to get resources from the government and foreign donors they have to grow illegal crops.

AD programs can succeed locally and have little or no effect on illicit drug supply as illegal crops tend to migrate to new locations. This "balloon

effect” has been remarkable in some of the most successful AD cases. In Thailand crops moved to Myanmar (Renard, 2001) and in Pakistan they moved to Afghanistan. Preventing crop displacement in response to government intervention is a daunting task that would require strong government presence and intervention in all possible areas where crops might move.

B. Eradication

Eradication can be voluntary or forced. Voluntary eradication requires negotiating with coca and poppy growing peasants. This is possible when there are strong peasant organizations that have the support of their communities. These organizations negotiate with the government and can enforce the agreements reached. When peasants are not well organized, negotiations on an individual basis are not likely to produce significant results. In order to negotiate an eradication program it is also necessary to include incentives for peasants to eradicate. These can be positive like a compensation for each eradicated hectare or negative when there is a threat of forced eradication. The governments’ commitment to eradication and their threats of forced eradication have to be credible. In these cases, voluntary eradication has become “voluntary”.

Forced eradication has been done manually and in exceptional situations like in Colombia, it has been done through aerial spraying. Manual forced eradication requires governments to send eradication crews to illicit crop areas. These include or have to be supported by armed personnel. Peasants are likely to oppose eradication and conflicts between the government and peasants are a real possibility. To be effective, the government must have a well-defined plan about how to respond to peasant reactions before proceeding with the eradication program; otherwise, the government will simply react to peasants’ actions increasing the probability of negative “unintended consequences.”

Aerial spraying is done in Colombia because the government does not have control over the coca and poppy growing regions and the risks for the lives of manual crews are simply too great. As noted above, aerial spraying is a blunt and inaccurate policy that is likely to have other complex effects. Aerial spraying may be inaccurate and uncertain. On the one hand, the sprayed chemicals can be taken by the wind and fall in other locations and on the other, peasants have devised ways to protect their plants to lower the effects of spraying.³² These results in differences between spraying and

³² The price of molasses in Colombia increased substantially in response to the aerial spraying program. Peasants apply a liquefied mixture of molasses to their plants for protection when they expect spraying.

eradication results: one sprayed hectare does not equal one eradicated hectare in fact, the ratio between the number of eradicated hectares to the decline in cultivated area in Colombia has been around 10 (Vargas, 2004).

Eradication can be an effective short-run policy. In order to succeed in the medium and long run it must continue to keep the peasants from growing illegal crops. It is more effective in the case of coca that is a bush with a twenty-year productive lifetime than of poppy, a short cycle plant that lasts about four months. Most poppy growing regions in Colombia can have two crops a year and peasants can replant after they are sprayed.³³

The United States government justifies the need for aerial spraying in Colombia because this country is the main source of cocaine and heroin in the United States market. There is no question that Colombia is the largest coca-producing nation in the world and that eliminating a large share of the Colombian coca crop would have at least a short-term effect on cocaine availability in the United States. This is not, however, the case for heroin. Colombia is a marginal heroin world producer (about 4 percent of the world's opium crop). Eliminating the Colombian poppy crop would lower heroin supply in the United States only if the trafficking syndicates could not find alternative sources or if new traffickers do not fill in the gap left by the small Colombian crop. In the case of poppy, eradication can be justified as part of the war against paramilitary and guerrillas in Colombia but the justification as part of the war on drugs in the United States is highly questionable.

Some of the issues related to aerial spraying were discussed above. One effect to be added is the peasant displacement it tends to generate because it destroys not only the illegal crops but also other crops that produce staples and very frequently the peasants' livelihood. Because of this, aerial spraying has caused significant peasant migrations out of coca growing areas in Putumayo to Colombian cities and other rural regions where they have joined the cohort of displaced people. It may also be argued that aerial spraying is very likely to increase the availability and willingness of young peasants to join armed groups like FARC and the paramilitary.

All eradication policies have the same problems of AD with respect to crop displacement. They can succeed locally, but that does not guarantee global success if crops move to other regions.

³³ This contrasts with the countries in the temperate zones where only one crop a year is possible.

C. Interdiction

Interdiction takes place at all stages of the drug production and marketing process. This includes laboratory seizures and destruction, interdiction of inputs (chemical precursors) in drug manufacturing, of drug shipments in the drug producing countries, while they are transported internationally and in the mainly consuming countries. Interdiction techniques cover a large range of technologies, from sniffing dogs to satellite mapping, shutting down airplanes and sophisticated sensors. Still, effective interdiction must rely on good intelligence networks.

Interdiction actions produce good photo ops that are frequently displayed in the media where record seizures make good news about anti-drug policy success. Yet, to have a significant effect on drug trafficking, interdiction should seize large percentages of the drugs produced in order to increase costs sufficiently to discourage traffickers. To achieve this, the level of repression applied by governments would have to be raised substantially; the interdiction budgets and the costs to society would have to increase substantially. For example, container inspections at ports and border crossings would have to multiply slowing down international trade and people movement.

At current interdiction levels that are socially tolerable, it is likely that about fifteen to twenty percent of the cocaine produced is seized. Empirical studies indicate that at these levels traffickers simply include interdiction costs as part of their transportation costs, that is, interdiction is just a normal cost of doing business and has little effect on total supply beyond a short-term disruption when large shipments are seized (Riley, 1995).

Corruption of those in charge of interdiction is also an issue as seized drugs may end up back in the market. This means that any interdiction program also required a good watchdog system to oversee the law enforcement agencies in charge.

D. Extradition

Extradition is a punitive measure that reflects the deep distrust of the United States on the justice system of the Andean countries. The idea behind extradition is simple: traffickers have great influence on the Andean societies, have corrupted their justice systems and have to be extradited in order to be punished.

An important question regarding extradition is its effectiveness to lower illicit drug supply. Law enforcers argue that extradition could have an impact on drug supply because of its deterrent effect, that is, its capacity to dissuade people from joining trafficking organizations and to induce those in the busi-

ness to drop out. And extradition of “cartel” leaders is a main weapon to dismantle trafficking organizations.

The deterrent effect of extradition is impossible to estimate but the generally small number of traffickers extradited and the proliferation of new trafficking organizations suggest that it has not been very strong. The effect of extradition on trafficking organizations is not clear either. Extraditing the leaders of those organizations could lead to their dismantling if they were organized in a way similar to modern corporations. This however, is not the case. The drug industry is made of a conglomerate of independent small organizations many of which provide services such as transportation and refining to trafficking leaders (Krauthausen and Sarmiento, 1991). These independents continue to operate when a big trafficker is captured. The developments in Colombia after the two large “cartels” were destroyed indicate that jailing leaders might at best have a short-term effect on drug supply but that in the medium and long run there does not appear to be any significant effect.

E. Asset expropriation and anti-money laundering measures

These measures are both punitive and deterrent and respond to the generalized belief that traffickers are in the illegal business for the money. If traffickers are deprived of their illegally obtained assets and income, they would not engage in the business. Again, the deterrent effect of these policies, as is the case with other anti-drug policies, can be relevant, but it is unknown.

Money laundering is a process designed to hide and disguise the origin of revenues and assets to prevent them from being confiscated and seized by the government and to allow their owners to use them in the legal economy without suspicion. In countries or regions where drug trafficking is socially accepted, drug revenues and the assets accumulated through trafficking are illegal but socially legitimate and do not need to be hidden. In those cases drug traffickers have frequently flaunted their wealth and are socially recognized as successful businessmen and women. In situations where traffickers have private protective armies, their need to launder capital to disguise its origin is less pressing and if their armed organizations are strong enough they might not really need to launder. The incentives and need to launder illicitly accumulated capital depend on the social environment and mores, and the law enforcement agencies’ power relative to that of the drug traffickers.

The money laundering literature focuses on the financial system. There are three steps in the process of laundering in this system. First, cash has to

be deposited in an account. Second, a series of electronic transfers are done among accounts from several jurisdictions, particularly financial off-shore centers to hide the origin of the funds. Third, the capital can then be invested or disposed off in the legal economy without raising suspicions about its origin. Most money laundering controls are designed to thwart this process. Banks are required to report to authorities cash deposits over \$10,000 and all suspicious transactions, they are also required to establish “know your client mechanisms” and internal auditing systems to prevent corruption within the banks. The United Nations Office of Drugs and Crime has developed model anti-money laundering laws and provides technical assistance for countries and off-shore centers to adopt them.

Laundering capital of Andean drug exporters requires several steps. Revenues from drug exports have to be deposited in the banking system abroad, many times in off-shore banking facilities. After several transactions to hide their origin, these funds can then be transferred to bank accounts and invested in the Andean countries. Other systems, however, appear to be more frequently used. For example, cash (US dollars) is transported to the Andean countries where it is sold to money exchange agencies, tourists, importers or other individuals who demand foreign exchange. Contraband provides another way to bring those funds into the Andean countries. Goods paid with cash are purchased in international markets and smuggled into the countries where they are sold to obtain local currencies. Some forms of “technical contraband,” like import under-invoicing and export over-invoicing are also used for these purposes.

After the capital is brought into the country and converted to local currency it can be invested. However, the need to hide its origin still remains since in poor countries anyone who invests even a few million dollars is conspicuous. Drug traffickers need to have legal business to provide a façade and protect their capital. Real estate is a favorite venue for this activity. In the Andean countries the real estate market is imperfect, prices and values are not transparent and transactions can be recorded at prices substantially lower than the real ones. Art and jewelry, goods that are difficult to price accurately, are also used to launder.

Successful anti-money laundering policies require the cooperation of the private sector (banking, real estate, retail stores, etc) and the coordination of several government agencies (customs, banking overseers, internal revenue, police, the judicial system, etc). Asset seizures and expropriations are not legally simple procedures. Indeed, one of the main purposes of the legal system is to protect private property rights. Not surprisingly, successful expropriations of drug traffickers’ assets in the Andean countries have not been common although recent changes in the Colombian laws appear to

have been able to change this. A frequent problem faced by Colombian governments has been the reversal of seizures and expropriations after legal appeals. In some cases, the government has been required to pay large compensations to those who recovered seized assets.

In some American jurisdictions local police departments have been empowered to expropriate assets used in drug dealing, to sell them and use those funds to increase their own budgets. These rather extreme cases have led to the expropriation of rented houses used by drug dealers without any knowledge of the owners. These measures have distorted law enforcement activities in some places as police departments have devoted their resources to go after victimless crimes that increase their budgets disregarding other crimes.³⁴

Anti-money laundering policies produce high profile cases like the expropriation of Pablo Escobar's hacienda "Nápoles" that was finalized in August 2004, more than 10 years after Escobar's death. Nine years after the capture of the Cali cartel leaders, on September 2004, the Colombia government seized some of their properties. These policies, however, do not seem to have made a significant dent on traffickers' wealth. Indeed, the assets expropriated are at most a very small proportion of any estimate of the wealth accumulated by drug traffickers or their annual revenues. This questions the relevance of the deterrent effect of these policies.

F. Some general considerations

Anti-drug policies require remarkable coordination among government agencies, governmental and private foreign donors, NGOs and private sector actors. This is a main policy challenge. In many places police and army are frequently antagonistic and distrust each other. Everywhere bureaucracies protect their turf, American government officials tend to distrust their counterparts in the Andes and vice-versa. Actors in the war on drugs want to show results and sometimes act hastily without sharing their plans with other relevant agents. Not surprisingly, anti-drug actions frequently reveal great lack of coordination. The Andean countries are poor, underdeveloped and have weak states. One may question if the required policy coordination is actually feasible in those countries. Indeed, if they could actually coordinate all anti-drug policies, one may wonder if they would not have had strong enough states and governments so that the illegal drug industry would not have established itself in the first place!

³⁴ United States Representative Henry Hyde's (1995) book presents a good summary of these problems.

Another issue related to policy formulation and implementation is corruption. Most anti-drug policies put government officials at risk of corruption.³⁵ This requires a continuous and strict watchdog system for every policy that would demand a degree of governmental sophistication and commitment that the Andean countries probably lack.

Finally, all these policies, except for AD, deal with illegal drugs as a law enforcement problem. There is no question that law enforcement is part of the problem but if the government answer is mainly repressive, chances of long-term success are rather low. It is as if policies were formulated based on a simple model that divided people into law abiding and law-breaking groups and the latter had to be controlled and punished without attempting to understand why law breaking behaviors are so much common in some locations, societies, countries and times than in others.

Current anti-drug policies should not be dismissed outright but they should be coherent with long-term institutional and structural social changes required to lower criminal behavior and drug activity in a particular country. If this is not done, the best that current policies may accomplish is some short-run successes. Unfortunately, some of these policies actually prevent the institutional changes needed for long-term success while the emphasis on all current policies deviates attention from the real changes required.

VII. The economic, social and political effects of the illegal drugs' industry development on the Andean countries

The effects of the illegal industry are significant, complex, widespread and difficult to evaluate. One obvious reason for this is that data about the industry are sketchy and unreliable. Even orders of magnitude about traffickers and illegal crop growers' incomes are hard to come by. Besides, traffickers' revenues are not always a good measure of the industry's importance in a country. In Colombia, for example, most of the industry's profits have been made in the smuggling stage of their business. Ballpark estimates indicate that a wholesale kilo of cocaine in Colombia sales for about \$1,500. The same kilo wholesale at port of entry in the United States would sale for about \$18,000 and somewhat more in Europe. Traffickers do

³⁵ This is one important reason why the United States army has refused to participate in the "war on drugs" within the United States.

not have to bring into Colombia the revenues when they export. Indeed, to pay suppliers they need only about 10 percent of export revenues that are paid abroad in foreign currency. What they do with those moneys depends on their expectations about interest rate differentials between Colombia and international markets and exchange rates variations (Correa, 1984, Reina, 1996). It has been argued frequently in Bolivia that the absorptive capacity of the economy is too small and traffickers have invested a large part of their profits abroad (Malamud-Goti, 1994, Mendoza, 1993). Colombians are known to be part of the drug distribution network in the United States and Europe; their profits are part of those countries GNP but a proportion of those profits is invested back in Colombia (Thoumi, 2003a). The basic point is that it is very difficult to get a good measure of actual drug moneys that enter an Andean economy and who gets them.

A more subtle and complex issue relates to the causality of the illegal drug industry. If one has a simple model in which the illegal industry is exogenous, then it is considered as an external factor, calamity or scourge that affects the domestic economy. If on the other hand one accepts the competitive advantage model discussed in this essay, the illegal industry locates itself in countries and regions that have a set of institutional and cultural characteristics that attract it. In this case, the industry is the result of domestic elements and the causality of the effects of the industry is less clear. Indeed, in this case it is more relevant to look at the illegal industry as part of a social process rather than as something that generates direct effects. Economic models have borrowed methods from physics and mathematics to determine cause and effect relationships. In the case of drugs it is perhaps more adequate to borrow from biology and look at drugs as part of an evolutionary process in which causality is less clear-cut.

The effects of the illegal industry depend on the structure and institutions of a country and the role that such country plays in the illegal industry.³⁶ The mainly economic effects are varied: “among which the most important and likely to have occurred are that

1. The industry can cause regional booms and busts in coca-, poppy-, and marijuana-growing regions and the cities where drug traffickers are concentrated.
2. Illegal drugs can generate a significant number of jobs, particularly in coca- and poppy-growing regions.
3. The illegal industry promotes money laundering.
4. It can distort consumption, investment, and import patterns as traffickers and their associates invest in real estate, machinery, equipment, and goods

that are not the most profitable or socially productive ones but which facilitate laundering. A similar situation occurs with consumer goods.

5. The abundance of foreign exchange it generates can be a cause of currency overvaluation and a loss of competitiveness by other exports and the domestic production that competes with imports.
6. The illegal industry can also increase the expectations of quick wealth and encourage high-risk speculative investments.” (Thoumi, 2003a: 160).

The industry’s structure has an important effect on the distribution of the illegally generated income and on a country or region’s income distribution. In places where the main activity is illicit crop growing, the plantings are in small farms like in Bolivia and Peru and farmers’ communities are strong, income is widely distributed and the illegal industry does not have a concentrating effect on the country’s income distribution. In those cases it can be said that the income distribution effects tend to be benign. When the main illegal activity is trafficking and a few syndicates capture most of the revenues generated, the country’s income and wealth distributions become concentrated. In these cases social tensions increase and the illegal industry generates a great deal of violence.

The illegal industry also needs an economic environment that facilitates asset and foreign exchange laundering. Here again the structure of the country’s economy is important. The size of a country’s economy influences the traffickers’ ability to launder: the larger the economy, the easier to invest and spend inconspicuously in it. In effect, any economy has several limits to launder illegal capital; one is determined by the productive assets that can be bought in the economy. A second limit is given by the amount of capital that can be laundered without generating significant law enforcement reactions. A third limit arises from the need to bring foreign exchange into the country. In this case, there is a limit to the contraband that can be sold in the domestic markets and on the capacity to overvalue exports and undervalue imports, systems used to import the illicit foreign exchange. A problem faced by traffickers in the Andean countries is that the size of their “laundromats” are small, requiring the development of a political protection network as their wealth becomes conspicuous.

The market structure of the economy also determines the capacity to launder assets. If the modern sector is concentrated in a few financial conglomerates, they can isolate themselves from the illegal industry. In this case it would be necessary for those conglomerates to become complicit with the illegal industry for it to be able to launder in the modern sector.

Because of the limitations to launder assets in the Andean countries, it is not surprising that real estate investments have been a favorite for drug

traffickers. Real estate in the Andean countries is frequently difficult to value because real estate and capital markets are imperfect and information about transactions is spotty. The price of the asset frequently depends on personal connections and the way payment takes place. Besides, the value of many transactions is underreported to avoid taxes.

Any illegal enterprise requires a social support network to succeed. In order to produce and traffic drugs the industry has to bribe and corrupt official at the local level. The small size of the Andean economies limits the ability of traffickers to invest their capital without state protection. To achieve this, the industry has had to bribe at high levels of the governments.

Looking at the illegal industry as part of a process, it is found that the effects of the industry through time do not depend on the size of the industry's revenues or profits at the time of the effects but rather on the history of the illegal industry in the country. That is, on the way it inserted itself into the economy, how it permeated the political system, on who has gotten the revenues through time, and on the government policies and their history. The length of time that the industry has been operating in a country is another important determinant of its effects. As time goes by the industry's weakens the country's institutions and if the industry lasts enough, it will also change the culture.

The influence of the illicit drug revenues on Bolivia, Colombia and Peru has varied significantly. Beginning in the early 1970s and for about 10 years, the industry's effects appeared to be positive. In Bolivian and Peru, where the industry's main activity was coca growing, benefits spread among a large number of peasants and the governments benefited from newly found exports. Indeed, the 1985 macroeconomic adjustment in Bolivia was facilitated by the presence of the illegal drugs industry. Similarly, illegal drug revenues played an important role in getting Peru out of its foreign debt and economic crises generated by the populist policies of Alan Garcia in the late 1980s.

In Colombia, groups of traffickers, "magicians" as they were called in popular parlance, flaunted their newfound wealth, excited public imagination and appeared to many as role models and ideals to be followed to achieve upward social mobility. In a country that had been subject to a tight foreign exchange constraint since the mid 1950s, an industry that generated large amounts of foreign exchange was perceived positively.

In the three Andean countries the illegal drugs industry generated "Dutch disease" effects in coca growing regions and in cities where the main traffickers were based. Urban real estate booms appeared in those cities as traffickers invested their capital. In Colombia the illegal industry development also resulted in rural land concentration as many industry actors purchased large plots of land.

As noted, drug traffickers in the three Andean countries needed political support for their activities and to protect their newly acquired assets. The

political systems of the Andean countries became more vulnerable to illegal drugs income than their economies.

In Bolivia, a country with a strong military and an authoritarian tradition, the military became active actors in the illegal industry. The short-lived regime of General Garcia-Meza in 1980 was the first time that a trafficking organization took over a government (Gamarra, 1994). In Peru the influence of drugs in politics and the armed forces has been subtler but the activities of Vladimiro Montesinos during the Alberto Fujimori administration illustrate the penetration of the illegal drug industry in Peruvian politics and armed forces (Dammert Ego-Aguirre, 2001, Rospigliosi, 2001).

Drug revenues in Colombia were larger and a lot more concentrated than in Bolivia and Peru and required a stronger social support network. Because Colombia did not have the same strong military and authoritarian tradition as the other two Andean countries, the influence of the illegal drug industry was quite different and affected the political system more directly. By the late 1970s they already had become principal political campaign financiers and the illicit industry's funding of the campaign of the president elected on 1994 led to an unprecedented political crisis. The threat of extradition from the mid-1980s exacerbated the traffickers' need to have a large political support network and they used all means at their disposal to intimidate and purchase politicians. Indeed, they unleashed an unprecedented narco-terrorist campaign against those who challenged them within the justice system or in politics. The illegal industry in Colombia has generated a lot more violence than anywhere else in the world.

In Peru and Colombia the illicit drug industry has also funded subversive groups and in Colombia it also finances counter-subversive paramilitary organizations. In the 1980s Shinning Path in Peru obtained funding from "taxes" on coca growers and traffickers. During the 1990s as coca fields grew in Colombia, FARC and some ELN fronts also collected moneys from peasants and traffickers. Some of the Colombian paramilitary groups originated as private protection armies of drug traffickers who purchased cheap lands in areas where guerrilla activity had depressed land values. They have been related more directly to trafficking than the left wing guerrillas.

Peasants in the three Andean countries have used illicit crops as a venue to attain some recognition and political power. Bolivian peasants are well organized in "syndicates" and as noted, for the first time in the country's history Indian candidates representing coca growers have a real possibility to become presidents. In Peru peasants have become politically organized around coca issues and are pressing the government. In Colombia peasants are less organized but coca has become the source of their newly gained political leverage.

The growth of the illegal drugs industry has internationalized domestic Andean conflicts and issues. The development of the illegal industry has put the Andean countries on the radar of the United States and European countries. In Bolivia the presence of the United States has been conspicuous for over two decades. In Colombia during the last 10 years it has grown dramatically. Today Colombia is the fifth recipient of foreign United States aid behind Israel, Egypt, Afghanistan and Iraq. Drug related issues have also become key issues in the relations of Colombia with Ecuador, Panama, Peru and Brazil.

The internationalization of domestic conflicts and the intertwining of those conflicts with the illegal industry have increased the complexity of the social issues and conflicts in the Andean countries and have made any solution more difficult to achieve. Today the peasant, subversion, counter-subversion and drug problems are all interrelated and their solutions are interdependent on each other.

The short and long-term effects of the illegal drug industry vary substantially. In the short run the economic effects can be positive and are similar to those of a boom in primary products. There is a group whose income increases substantially, there is a significant inflow of foreign exchange, some people become rich quickly, their expenditure has a significant multiplier effect, the currency revalues, in coca and poppy growing regions employment increases, etc. There is however, a significant difference with other booms as the state has no way to tax illicit revenues.

In the long run the effects of illegal industry growth have been extremely negative. The illegal industry exacerbates political corruption, encourages other criminal activities, weakens the rule of law and increases transaction costs for everyone in the economy. The illegal drugs industry locates itself in a country that is vulnerable, where the rule of law is weak and social behavioral controls lax and acts as a catalyst that worsens the country's institutional deficiencies.

This negative catalytic effect of the industry has expressed itself in the three Andean countries more clearly in the political sphere and social institutions than in the economy. In other words the social and political effects have been negative and more important than the economic effects of the industry. The cases of Bolivia, Colombia and Peru illustrate this point. According to all estimates, from 1970 to 2000 the share of the GDP generated by illegal drugs in Bolivia and Peru was significantly higher than in Colombia. Yet, the negative effects of the industry were a lot greater in Colombia than in the other countries. Furthermore, in all three countries the illegal industry's share of GDP has declined substantially during the last 25 years but the effects of the industry today generate a lot more social and political

instability than in the past. The point is that the economic benefits of the illegal industry depend mostly on today's revenues and how they are used. In Colombia those revenues were used in the past to accumulate wealth. Today, a significant share of those revenues contributes to the armed conflict and to wealth destruction. The negative social, political and economic effects of the illegal industry do not depend only on today's revenues but mainly on the history of the illegal industry, on how it has penetrated society and polity and how those funds have been used in the past. The illicit drugs industry has been like a mermaid that attracted the marines on a boat to sink it.

The reliance of guerrillas and paramilitary forces on drug funds illustrates the devastating long-term consequences of the illicit industry's development in Colombia. While in the 1970s the drug industry was seen as a good business that enriched the country, by the 1990s its revenues contributed greatly to wealth destruction instead of accumulation. The illicit industry has also been a catalytic element that has changed the culture and institutions. People have become more materialistic and money oriented, seek quick results and the rule of law has weakened.

VIII. A few policy recommendations aimed at lowering the degree of policy debate conflict and promoting a better dialogue.

It is difficult to recommend drug policy changes because the process of policy formulation does not allow for a reasonable policy evaluation and change. Before policies can be modified and improved, it is necessary to promote a policy debate aimed at lowering the level of conflict between those who promote and those who oppose current policies. The drug "problem" is one of social structure, institutions and culture. As it is the case with institutional studies, in the present case one comes strong on diagnosis and short on recommendations. A few policy suggestions, however, could be ventured to improve the debate and to weaken the conflict around illicit drugs. This is done knowing that the policies suggested will not solve the "drug problem" in the short run but will hopefully help generate a process of institutional and culture change that may bring long term success.

First, as noted above, coca's position in the United Nations conventions is unclear. On the one hand, the conventions do not allow coca to be used expect for medical and scientific research purposes and on the other, its traditional uses are allowed as long as they take place in the regions where there is historical evidence of prior use. The international

agencies could undertake a serious study and a program to encourage small changes to the Conventions.

Changing the conventions to allow coca traditional and possible industrial uses everywhere as long as they do not lead to cocaine production would help eliminate some of the frictions between peasants in Bolivia and Peru and the rest of the society in those countries. This change would mitigate social resentment and would help advance a dialogue among conflicting groups. This change would entail tolerance for the non-medical and non-research use of minute quantities of cocaine like those found in coca tea. Of course, it can be argued that coca tea has a medical use to combat high altitude sickness (“soroche”) but this is not the case of tea consumed at sea level. This change is consistent with the evidence that shows that coca tea is not addictive and does not lead to cocaine use or addiction.

The opposition to the proposed change would argue that tolerating even a minute amount of cocaine use would open the gates for tolerating other drugs’ recreational uses and lead to a slippery slope that would end up legalizing all drugs. The issue here is an empirical one and it should be researched. The slippery slope argument assumes that the goal of those who advocate policy changes is a free market without restrictions. There is only a very small and rather irrelevant minority of drug policy change promoters that aim at that result. The overwhelming majority simply seek more effective policies and lower social costs associated with drug production, trafficking and consumption.

A complementary initiative would be the elaboration of a good study of coca demand for traditional and industrial uses aiming to organize the market for licit coca in Bolivia, Peru and Northern Argentina where the coca chewing habit persists. In Bolivia and Peru there are legal coca plantings to satisfy traditional demand and few industrial users. For example, coca-cola purchases coca leaves from the government agencies that are in charge of controlling and regulating those markets.

In Bolivia and Peru there is no real knowledge of the size of licit demand, including consumption of Bolivian coca in Northern Argentina. There is also confusion about the extent and nature of the rights to produce legal coca. For example, in Peru the Empresa Nacional de Coca (ENACO) has a registry of legal coca growers that dates to 1978. The original registry included 25,148 growers. Many have died others have stopped growing coca and others are likely to have moved to the black market. In late 2002 ENACO had only 7,910 active registered producers. ENACO finances itself from the difference between its purchasing and selling price, in fact placing the burden of coca market control on licit producers and consumers. This situation has generated a black market of coca for licit uses. ENACO itself is not clear about whether

the registry authorizes coca in the plots owned by peasants registered or if the registry only authorized individuals to plant coca. In other words, it is not clear whether the right was personal or attached to the land. The issue of whether those rights can be inherited is also unclear. The situation is made more confusing by Fujimori's measure to de-penalize coca growers in the early 1990s. As it stands, illicit coca is penalized and can be eradicated but coca growers are not penalized. The government is aware of the confusing situation of coca and has tried to formulate a new coca law unsuccessfully.

The situation in Bolivia is also confusing. Legal coca is supposed to be produced on 12,000 in the Yungas. However, peasants argue that current plantings are less than that and they have expanded plantings in the Yungas. Their position is that they should be allowed to grow as much coca on 12,000 hectares as it is physicality possible, irrespective of demand.

These two cases open opportunities to establish modern controlled markets for coca in both countries. Indeed, if the United Nations modifies the conventions and allows non-medical and research coca uses, it can also develop a market control mechanism similar to the one it has for poppy used to produce heroin and codeine in which the International Narcotics Control Board established production quotas in some countries and oversees the local control systems. As noted, USAID is funding a study to determine licit coca demand in Peru. Unfortunately, it is very unlikely that the results of this study be accepted by the peasants as they greatly distrust of the United States and the Peruvian Government. A study funded by international agencies including researchers recommended by the Bolivian and Peruvian governments as well as international NGOs and peasant organizations would have widespread credibility and contribute to a better understanding among the contending groups.

Another important contribution would be to open a sensible debate to clarify the environmental effects of aerial spraying. The current debate is clouded in misunderstandings, half-truths and falsehoods. The effects of aerial spraying can be successful as much as the short-term coca and poppy supply is concerned but they may have devastating health and environment effects in the medium and long run. Knowledge about these possible effects is very uncertain but we could be confronting a case worse than the one generated by Agent Orange in Vietnam. The high altitude tropical forests eradicated are almost impossible to recover. Those forests are the main source of water in Colombia. The deforestation of the Amazon can also have large weather altering effects in the planet. The point is that in the zeal to fight the "war on drugs", we might be creating an environmental catastrophe of great magnitude. The main argument of eradicators is that coca plantings and cocaine manufacturing by themselves do a great deal of

environmental damage. This is certainly true, but it does not exonerate anyone from destroying even more environment. The simple point is that if someone does something bad, it does not allow me to do the same.

A policy paper on AD exploring the consequences of AD being a counter project would also be a good contribution to the drug debate. Some of the issues that should be raised are the need for permanent monitoring and the question of AD financing. AD has been welcomed by illicit crop countries as long as they are paid by foreign donors. A question to be explored is under which conditions should illicit crop countries fund highly questionable counter projects and increase their national debt? Putting the same question in a broader form, how does one evaluate the results of a counter project? Answering these questions would contribute to better policy debate and policy formulation and implementation.

Summarizing, the main role that international agencies may play in confronting illicit drug issues would be to introduce a cool head and promote a serious science based debate on drug issues. This would include both social and natural sciences and would be a first step in promoting policy reform, to encourage the development of better social controls to drug consumption, trafficking and production and to breach the gap that currently exists across countries and scientific disciplines in their views about mind-altering drug phenomena.

IX Bibliography

- Arango, Mario
1988 *Impacto del Narcotráfico en Antioquia*, Medellín: Editorial J. M. Arango, Tercera edición.
- Blum, Jack, Michael Levi, Thomas Naylor and Phil Williams
1998 *Financial Havens, Banking Secrecy and Money Laundering*, New York: United Nations.
- Caballero, Antonio
1996 "El costo de dos visas," *Semana*, 744.
- Cabieses, Hugo
1996 *Commercialising coca: possibilities and proposals*, Narcotics and Development Discussion paper 11, Catholic Institute for International Relations, London.
- Cabieses, Hugo and Eduardo Musso
1999 *Desarrollo Alternativo y Desarrollo Rural: Debate sobre sus límites y posibilidades*, Centro Regional Andino (CReA) and Instituto Latinoamericano de Cooperación para la Agricultura (IICA): Lima
- Chaparro, Camilo
2005 *Historia del Cartel de Cali: el ajedrecista mueve sus fichas*, Bogotá: Intermedio Editores.
- Correa, Patricia
1984 "Determinantes de la cuenta de servicios de la balanza cambiaria," *Ensayos sobre Política Económica*, 6, December.
- Dammert Ego-Aguirre, Manuel
2001 *Fujimori-Montesinos: el Estado Mafioso*, Lima: Ediciones El Virrey
- Defensoría de Pueblo
2002 "La ejecución de la estrategia de erradicación aérea de los cultivos ilícitos, con químicos, desde una perspectiva constitucional", Bogotá: Defensoría del Pueblo.
- De Ferranti, David, Guillermo E. Perry, Daniel Lederman and William F. Maloney
2002 *De los recursos naturales a la economía del conocimiento. Comercio calidad del empleo*, Washington, D.C.: World Bank.
- De Rementería, Ibán
2001 *La Guerra de las Drogas: Cultivos ilícitos y desarrollo alternativo*, Editorial Planeta
- De Roux, Rodolfo R.
1990 *Dos Mundos Enfrentados*, Bogotá: CINEP.
- Escotado, Antonio
1999 *A Brief History of Drugs: from the stove age to the stoned age*, Rochester, Vermont: Park Street Press.
- Gagliano, Joseph A.
1994 *Coca Prohibition in Peru: the historical debates*, The University of Arizona Press.
- Gamarrá, Eduardo A.
1994 *Entre la Droga y la Democracia: la cooperación entre Estados Unidos-Bolivia y la lucha contra el narcotráfico*, La Paz: ILDIS.
- Gootenberg, Paul
1999 "Reluctance of resistance? Constructing cocaine (prohibitions) in Peru, 1910-1950" in P. Gootenberg (Ed.), *Cocaine global histories*, London and New York: Routledge.
- Guáqueta, Alexandra
2004 *Reglas de amigos: el impacto de la guerra anti-drogas en las relaciones Colombia-Estados Unidos* Bogotá: Centro Editorial Javeriano, (CEJA)
- Gugliotta, Guy and Jeff Leen
1990 *Kings of Cocaine*, Harper.

- Hyde, Henry
1995 *Forfeiting Our Property Rights: is your property safe from seizure?*
Washington, D.C.: CATO Institute.
- Krauthausen, Ciro and Luis F. Sarmiento
1991 *Cocaína & Co.: Un Mercado Ilegal por Dentro*, Bogota: Tercer Mundo Editores.
- Landes, David
1998 *The Wealth and Poverty of Nations*, New York: Norton.
- Lee, Rensselaer W. III, and Patrick Clawson
1993 *Crop Substitution in the Andes*, Office of National Drug Policy Control: Washington, D.C.
- Llano, María Clara and Marcela Campuzano
1994 *La chicha, una bebida fermentada a través de la historia*, Bogotá: Instituto Colombiano de Antropología and CEREC.
- Malamud-Goti, Jaime
1994 *Humo y Espejos: la paradoja de la Guerra contra las drogas*, Buenos Aires: Editores del Puerto
- Mendoza, William R.
1993 *Los Mercaderes de la Muerte*, Buenos Aires: Marymar Ediciones.
- Morales, Evo
2003 "Bolivia, el poder del pueblo" in *El Gato Encerrado*, November 5, (Speech made in Mexico's encounter In defense of humanity).
- Reina, Mauricio
1996 "La mano invisible: narcotráfico, economía y crisis," in Francisco Leal-Buitrago (Ed.), *Tras las Huellas de la Crisis Política*, Bogota: TM editores-FESCOL-IEPRI.
- Revelo-Calderón, Dyva
2001 "Efectos de la Fumigación Aérea en el Valle del Guamuez – San Miguel – Orito, Putumayo" Departamento Administrativo de Salud, Oficina de Planeación, Sección de epidemiología, DASALUD: Putumayo.
- Renard, Ronald D.
2001 *Opium Reduction in Thailand: A thirty year journey*, UNDCP: Bangkok.
- República de Bolivia
1998 *¡Por la Dignidad! Estrategia Boliviana de la Lucha Contra el Narcotráfico, 1998-2002*, La Paz: Ministerio de Gobierno.
- Restrepo, Victoria Eugenia
2004 "El programa de desarrollo alternativo del Plan Colombia", paper presented in the seminar: "La política de desarrollo alternativo y su modelo institucional", Bogotá: Universidad de Los Andes, September 7 and 8.
- Riley, Kevin Jack,
1995 *Snow Job? The War Against International Drug Trafficking*, Transaction Publishers.
- Rivera-Cusicanqui, Silvia
2003 *Las Fronteras de la Coca*, Instituto de Investigaciones Sociológicas "Mauricio Lefebvre", Universidad Mayor de San Andrés and Ediciones Aruwiyiri: La Paz, Bolivia.
- Ronken, Theo, Kathryn Ledebur and Tom Kruse,
1999 *The Drug War in the Skies: the U.S. "Air Bridge Denial" Strategy: the Success of a Failure*, Amsterdam: Transnational Institute and Acción Andina
- Rospigliosi, Fernando
2001 *Montesinos y las fuerzas armadas. Cómo controló durante una década las instituciones militares*, Lima: Instituto de Estudios Peruanos.
- Salazar, Alonso
2001 *La Parábola de Pablo. Auge y caída de un gran capo del narcotráfico*, Bogotá: Editorial Planeta.

The causes of illegal drug industry growth in the Andes, anti-drug policies and their effectiveness.

Scott, Peter Dale, and Jonathan Marshall

1991 *Cocaine Politics: Drugs, Armies and the CIA in Central America*, University of California Press.

Sherret, Laurel

2005 “*Futility in Action – Coca Eradication in Colombia*”, *Journal of Drug Issues*, Winter Thoumi, Francisco E.

1995 *Political Economy and Illegal Drugs in Colombia*, Boulder: Lynne Rienner.

2003a *Illegal Drugs, Economy and Society in the Andes*, Washington: Woodrow Wilson Center Press and The Johns Hopkins University Press.

2003b “*Illicit drugs in the Andes five years after UNGASS-98*” in D. Diegel, H. Van de Bunt and D. Zaitch (comps.), *Global Organized Crime: Trends and Developments*, Kluwer Academic Publishers.

2005 “¿El debate sobre drogas que alteran la mente es sobre drogas o sobre ideologías y valores básicos?” in *Análisis Histórico del Narcotráfico en Colombia, Memorias de la VIII Cátedra Anual de Historia “Ernesto Restrepo Tirado”*, Bogotá: Museo Nacional de Colombia.

Vargas-Meza, Ricardo

2003 *Drogas, Conflicto armado y Desarrollo Alternativo*, Bogotá: Acción Andina.

Tullis, LaMond,

1995 *Unintended Consequences. Illegal Drugs & Policies in Nine Countries*, Boulder: Lynne Rienner.

United Nations, Office of Drug Control and Crime Prevention (UNODCCP)

2001 *Global Illicit Drug Trends 2001*, New York.

United Nations Drug Control Programme (UNDCP)

2002 *Peru: Coca Cultivation Survey 2001*, Lima: February.

United Nations Office of Drugs and Crime (UNODC)

2004 *World Drug Report 2004*, Vienna.

United States Department of State

Bureau for International Narcotics and Law Enforcement Affairs

2003 *International Narcotics Control Strategy Report*, Washington, D.C.

2004 *International Narcotics Control Strategy Report*, Washington, D. C

Uribe, Sergio

1997 “*Los cultivos ilícitos en Colombia. Evaluación: extensión, técnicas y tecnologías para la producción y rendimientos y magnitud de la industria*”, in F. Thoumi, (Ed.), *Drogas Ilícitas en Colombia: su impacto económico, político y social*, Dirección Nacional de Estupefacientes and PNUD, Bogotá: Editorial Planeta.

Vargas, Ricardo

2004 “*Narcotráfico, guerra y políticas antidrogas*” Seminar “*La Política de Desarrollo Alternativo y su Modelo Institucional*”, Bogotá: Universidad de Los Andes, September 7 and 8.

Vidart, Daniel

1991 *Coca, Cocales y Coqueros en América Latina*, Bogotá: Editorial Nueva América.