



Coca Leaf in Court: Cultural Rights and the Toxicological Labyrinth

**By José Carlos Bouso, Constanza Sánchez,
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The Ayahuasca Defense Fund, ICEERS' program offering legal support for cases related to traditional plants, has received a growing number of requests for expert opinions in the legal proceedings involving coca in recent years. In collaboration with the Transnational Institute and lawyer Roberto Castro, we have contributed to creating and implementing legal strategies focused on three issues: human rights, critiquing toxicological analyses conducted by the State, and problematizing the international prohibition of the coca leaf based on its potential physiological toxicity.

One fundamental issue at the center of the debate, which we have commented on in previous posts, is how to address the use of psychoactive plants outside their traditional contexts. The response by various governments has been to follow the trend toward criminalization. However, there are many faults in the prohibitionist approach which prioritizes drug control over human rights.

There have been at least four coca leaf cases brought to trial in Spain since January 2020. All of them followed a very similar pattern: Andean migrants, having resided in Spain for years, were detained at a Spanish airport upon their arrival back into the country. They had purchased relatively small quantities of coca leaf (between two to four kilograms). Once the coca was confiscated, the criminal proceedings began with the Public Prosecutor's Office (*Fiscalía*) who typically recommended between four and five years of incarceration and very large fines.

In this report, we will provide an overview of what happened in these cases along with our analysis of how flawed toxicology processes illustrate the challenges that coca leaf faces in the courts in regions far away from traditional contexts.

A Complex Web of Legal Proceedings

Our work on these types of cases began in 2015 when criminal charges were brought against a Colombian citizen for receiving a package of *mambe* (a Colombian traditional mixture of powdered coca leaf). Customs at the Adolfo Suárez Madrid-Barajas airport seized the package. According to the police report, it contained 2,300 grams of plant material which was identified as coca leaf after being analyzed by the Customs Central Laboratory. Authorities then staged a controlled delivery based on the assumption that the person who would receive the "package containing cocaine (...) might be involved in an alleged crime against public health (drug trafficking and smuggling)."¹

A report from the Madrid-Barajas Provincial Customs Department's Risk Analysis Unit stated, "Once the relevant tests are performed, every time the cocaine alkaloid or other substances are detected, it is concluded that the sample contains coca leaves, a substance included in the yellow list of narcotic drugs under international control."

However, the report did not provide any information on the methods of analysis that were used to reach such a conclusion, nor details about the percentage of cocaine found in the sample. Based on this information, the individual was detained for a “crime of smuggling and an offense to public health,” which led to police intervention and legal proceedings. The Court of Olot (in Girona, Spain) requested that the National Institute of Toxicology (*Instituto Nacional de Toxicología*; INT) test the sample to determine its purity. The sample consisted of a “green powdery substance (...) with a total net weight of 2,125.5 grams,” which, according to the tests, showed a “cocaine base purity of 0.30% +/- 0.03%. The total amount of cocaine in the sample received is 6.3 grams +/-0.6 g”.

The court then requested an assessment of the sample’s final market value from the Spanish Tax Agency (*Agencia Tributaria*). Below is a full transcription of the agency’s calculations, which is quite astonishing.

“According to the table from the General Police Directorate of average prices and purity levels of drugs on the illicit market for the second half of 2014, the value of the cocaine would be as follows:

- *If sold in kilograms (with a purity of 63%), it would be worth €33,578 per kilogram. As the confiscated cocaine has a purity of 0.30%, it would be worth €159.89 per kilogram. Because the intercepted substance weighed 2,125.50 grams, its value would be €319.78.*
- *If sold in grams, the tables indicate that each gram would be worth €57.47 at a purity of 39%. Since the purity of the confiscated cocaine is 0.30%, the market value of each gram would be €0.42. Thus, its total market value would be €893.79 if sold in grams.”*

For those unfamiliar with the terminology of chemical analysis, the Tax Agency’s equivalency tables refer to cocaine hydrochloride, which is the isolated white powder substance typically consumed by snorting up the nose. *Mambe* is a toasted or ground coca leaf powder mixed with crushed seashells or the ash of plants native to Colombia. The preparation is typically made into a ball and placed inside the cheek. It is never snorted. Anyone who attempts to snort *mambe* would suffer excruciating pain in their nasal cavity. Therefore, the Tax Agency’s cocaine equivalency tables are not technically or pharmacologically applicable to *mambe*. Any attempt to establish such equivalency is erroneous.

A Happy Ending

The defense lawyer argued that: 1) the confiscated amount was within the acceptable limits for personal use, as “there is plenty of jurisprudence from the Supreme Court establishing the 7.5-gram threshold,”² and 2) “the court should consider the error [of] prohibition because the use of coca leaves is widely respected and tolerated in Colombia.” Despite the appeal, the Public Prosecutor rejected the request for dismissal and ordered that the proceedings continue. This decision was then ratified by the trial judge, who inferred that the act constituted a crime against public health by causing serious harm. The prosecution recommended a sentence of “four years in prison, the suspension of the right to vote for the duration of the sentence, and a fine of €2,000, with 30 days of detention in the event of non-payment in accordance with the limits provided for in article 53.3 of the C.C., plus the Costs of the Proceedings.”

However, the hearing for the case had a happy ending. Due to the evidence showing the absurdity of the case (the charge of buying a little over two kilograms of coca leaves by mail to extract cocaine and sell it on the illicit market), the prosecution dropped the charges. But not all cases have ended in the same manner. In any case, the number of resources used for the legal proceedings (enforcement, being detained at police stations, substance testing, court proceedings, etc.) does not seem to compensate for the harm they are intended to prevent.

Coca leaves are not controlled for the danger they pose, but rather for socio-political reasons stemming from a historical context from the 1950s that has nothing to do with the present. This perspective is rooted in the 1950 report that was used to justify the control of coca leaves, which is riddled with racist and colonial references. The report is inconsistent with today's scientific evidence and standards for human rights.

Coca Leaf in Spanish Courts

Although the person in the above case had ordered the leaves by mail, people are more frequently detained at the airport. It is commonplace for migrants from Andean countries to travel to Spain carrying small amounts of coca leaves. Therefore, confiscations and detentions often happen when arriving at airport customs in Spain. Our experience in this matter has led us to identify what has become a "custom" or practice among security forces. We do not know where the basis for this comes from, but these practices have been confirmed by various agents' testimonies during the trials. The common scenario is that no criminal charges are made when a person (especially someone from Bolivia) is carrying under two kilograms of coca leaves. The person is instead charged with illegal possession under Organic Law 4/2015 on the Protection of Public Safety. They are fined and the authorities seize the plant material. However, when someone is found with more than two kilograms, authorities initiate criminal proceedings.

As we will discuss in detail, most cases have ended in conviction (after the prosecution appeals to the Supreme Court), although they receive a sentence of under two years with no time in prison. There are currently three Supreme Court rulings that set the precedent of giving the defendant a six-month sentence. This is considered a "minor offense" and the person is sentenced to a few months in prison, even though the prosecutor usually asks for four years. In these three cases, the Supreme Court did not accept that the coca leaf was for personal use. They instead decided there was a risk the coca leaves would be distributed to third parties.

However, this strict standard does not take into account that personal use can be applied to these cases. Personal use does not constitute a criminal offense. It has been confirmed and considered grounds for acquittal by the Supreme Court. Acquittals may still be possible at the provincial courts level if these types of cases are considered within the umbrella of personal use. It must be noted that personal use and possession do not constitute a criminal offense in the Spanish legal system.

After performing a search in the Aranzadi database (searching for "coca leaf" as keywords), we selected six rulings that we believe are representative of these kinds of cases. We have analyzed them along with the three cases we were actively involved in. Again, most of them follow the same pattern whereby people are stopped when exiting the baggage claim area of

an airport, generally in Madrid or Barcelona. Approximately four kilograms of coca leaves are detected. The person is arrested and brought before a judge who requests that the National Institute of Toxicology conduct testing to calculate the concentration of cocaine and assess its potential value on the illicit drug market. The Public Prosecutor recommends a sentence of approximately four years of incarceration and a corresponding fine for a crime against public health.

The table below presents detailed information on each case:

Table I: Analysis of 6 Coca Leaf Legal Cases

Ruling N ^o .1	Nationality	Detention	Amount confiscated (grams)	Purity	Total amount of cocaine (grams)	Market price (euros)	Recommended sentence (years)	Recommended fine (euros)	Court ruling
108/2013	Bolivian	Airport	10,614	0.6%	68*	3,027	5	8,000	Acquitted
457/2013	Bolivian	Airport	7,450	0.4%	30	2,244	4	3,000	Acquitted
395/2014	Bolivian	Airport	4,293	0.5%	21.5	The court ruled there wasn't sufficient proof to confirm the value in the illicit market of the seized goods.	2	1,373	Acquitted
156/2015	Bolivian	Sent by mail (3 packages)	568 ²	4.9% ³	No information	1,475.25	3	1,500	3 years in prison and a fine of €1,500
70/2016	Bolivian	Airport	2,471	<1.5%	No information	No information	3	2,605.04	1 year and 6 months, and a fine of €2,605
118/2017	Colombian	3 packages sent by mail	2,125.5	0.3% +/-0.03%**	6.3+/-0.6	893.79	4	2,000	Acquitted (during oral hearing)
160/2017 ⁴	Bolivian	Airport	4,475	0.6% +/-0.06%	26,616+/-2.6	3,857.19	No information	No information	6 months and the costs of the proceedings
691/2018	Bolivian	Airport	4,485	0.4% +/-0.1%**	20***	1,153	4	2,000	6 months in prison and a €30 fine.
353/2021	Bolivian	Airport	4,190	<1%*** *	41****	5,813.63	4	10,000	Acquitted

* When cross-multiplication is done, the total amount of cocaine should be 63.3 grams, not 68.

** Tests performed by the National Institute of Toxicology, Barcelona unit. According to the report, the techniques used were: gas chromatography with flame-ionization detection (GC-FID) and gas chromatography-mass spectrometry (GC-MS).

*** When cross-multiplication is done, the total amount of cocaine should be 17.94 grams and not rounded up to 20 as it appears in the INT report.

**** Tests performed by the Laboratory of Narcotic Drugs and Psychotropic Substances of the Spanish Agency of Medicines (*Laboratorio de Estupefacientes y Psicótopos de la Agencia Española del Medicamento*). According to the report, the techniques used were: colorimetric reactions, extraction with organic solvents, HPLC, GC-FID, GC-MS and FTIR.

**** In their report, the Public Prosecutor's Office established a number arbitrarily, as there is no precise calculation that could create this result.

1 The sentence issued by The Barcelona Provincial Court has been omitted, but the number has been maintained.

2 Corresponds to three packages of 165, 201, and 204 grams, respectively.

3 Average purity was 6.3%, 3.87%, and 4.71% respectively.

4. In this case, the court declared that coca leaf "does not cause serious harm to health as the Supreme Court adopted a classification [used] in a similar case to the one being prosecuted." The accused was then sentenced to "six months of imprisonment without a fine, as the value of the coca leaves does not coincide with the cocaine alleged by the Public Prosecutor's Office." The recommendation by the Public Prosecutor's Office does not appear in the court decision.

Since these rulings are based on different legal arguments, we will not analyze each of them individually. Instead, we will draw a series of conclusions on their social impact. Law is, after all, an instrument used to serve the societal good. It is understood as the just regulation of the consequences of human behavior in society. Therefore, its purpose is to pursue justice and protect people from the harm that other people or public institutions may inflict.

Below are some reflections on the information in Table I above. It is surprising to see the overzealous manner in which the Public Prosecutor's Office goes after people transporting relatively small amounts of coca leaves. As previously mentioned, the control of coca leaves stems from a set of historical and political factors that are not compatible with the modern values of the international community. There is not a single piece of scientific evidence demonstrating coca leaf could cause harm to public health. On the contrary, it has many therapeutic benefits and plays an important role in the culture of Andean Peoples, where it has supported social relations since time immemorial.³

The vending of coca and coca products in Peru, Bolivia and Colombia is legal and thriving. However, coca trade across borders is not allowed. To suspect someone of bringing coca leaves from their country of origin in order to extract cocaine in Spain is preposterous. In relation to the prosecution of possession of coca leaf, the leaves are traded informally among Andean and non-Andean people in Spain. Their consumption is for social purposes, and not for the extraction of alkaloids.

Therefore, consuming coca leaves is far from being a public health problem; it is rather the opposite. The Public Prosecutor's lack of consideration for the social and cultural context – and its insistence on initiating costly criminal proceedings, both in economic and human terms – is surprising given how this impacts those being prosecuted, and their family and community. The mission of the Public Prosecutor's Office should not be to bring charges because a law has been breached, but rather to act in service to the public good. These procedures are disproportionate at best, and at worst, simply unjust. They are a method of state violence, supported by an outdated law that obstructs social justice and violates human rights.

Despite the Public Prosecutor's eagerness to start criminal proceedings, the courts tend to be more reasonable and acquit those charged when they get to the trial. But this is not always the case. Since the Supreme Court ruled in 2017 that coca leaf does not cause serious harm to health, there is a tendency to penalize defendants with six months jail time (people without criminal records do not go to prison in Spain) and a small fine or a proceedings fee. However, since this Supreme Court ruling, there have been two cases that ended in acquittal. A strong legal defense was prepared for these cases. It included expert opinions

commissioned by the defense to explain the medical, pharmacological, historical, and cultural aspects of coca leaves. However, in the table above, there is one case where the prosecution recommended three years of imprisonment and a fine of €2,605. The court maintained the fine, but cut the sentence in half. This is odd because the reported cocaine percentage is inconsistent with the typical concentration found in coca leaves, as noted below.

One interesting fact in Table 1 above relates to the concentration of cocaine found in the coca leaves. The amount of cocaine, or any other component for that matter, is not the same in all coca plants. As with any plant, the concentration of its components (including cocaine in this case) varies according to various conditions such as the ecosystem, altitude, soil quality, the time day and season it is harvested, as well as the way it is dried and stored. Previous studies conducted in the 1970s analyzed the presence of cocaine in plants harvested in different parts of the Andean region. They found the concentration of cocaine in fresh coca leaves was 0.6% on average.⁴ More recent studies have confirmed this percentage, which can vary up to 17%, depending on previously mentioned factors.⁵ More specifically, differences of up to 8% were observed in the drying process alone.⁶ More recent studies show that even specimens grown in greenhouses differ in cocaine concentration.⁷

When different samples are grown in the same area, the concentration can vary up to twice as much when comparing dry and rainy seasons.^{7,8} In addition, of the two hundred species in the *Erythroxylum* genus, the concentration of cocaine reaches 0.6% in only two species: *E. coca* and *E. laetevirens*. In a study of 51 different species, cocaine was found in a concentration of less than 0.001% in 23 of them.⁹

It is therefore surprising that there was so little variation among the confiscated samples of coca leaf, given that their cocaine content was said to vary between 0.3% and 0.6%. There is even one analysis that showed the average concentration (from three different samples) at 4.9%, a level never previously referred to in the scientific literature. As mentioned, the average percentage of cocaine in fresh leaves is 0.6%.¹⁰ Drying can produce a variation in alkaloids because exposure to light can decrease cocaine content.^{11,12} While we do not know how fresh the different confiscated samples were, the toxicological test results are relatively homogenous in all seized samples, which is inconsistent with the scientific literature.

In the table, one sample did not have an indicated calculation, and <1% was reported instead. This case ended in acquittal for several reasons, one of which was the failure to include this amount. The Public Prosecutor's Office made its own estimations and stated there were 41 grams of confiscated material seized during the indictment. This calculation was based on the assumption that the cocaine content of the sample was 1% (it weighed 4,190 grams). This is again unlikely, as such a high concentration has never been found in any analyzed sample, scientific journal, or publication. In another case, the result was reported to be <1.5%, which also prevents us from knowing the exact concentration. Even so, the accused was condemned to a year and a half in prison and a fine of €2,600.

Finally, in two of the cases presented in the table, the amount of cocaine that the INT states is higher than the actual amount calculated (if we cross-multiply the net amount and the level of purity found in the toxicological analysis). It is important to note that in ruling 691/2018, the toxicological analysis referred to 20 grams. But when cross-multiplication is used, this amount decreases to 17 grams. Even though an expert report specifically discussed the results of the toxicological analysis and pointed this difference out, the 20-gram amount still appears in the verdict.

Conclusion

We have provided an overview of our experience in defending coca leaf-related cases outside of their traditional contexts, and explained the failing aspects to guarantee fair judicial processes. **There are serious flaws in toxicological analysis, which makes it impossible for people to have a fair trial, since this methodology often determines whether a person is prosecuted, the duration of their sentence, or the amount of the fine.** In the future, we will highlight other aspects related to these cases in order to draw attention to how the criminalization of psychoactive plants works in practice and what can be done to reduce harm.

The political response to the traditional use of coca outside of the Andean region requires less criminalization and should focus on a more social and rights-based mindset. In a world of migration and cultural exchange, it would be more constructive if the social response considered the benefits traditional plants offer across the world.

References

1. At the time of arrest, the detainee was carrying (we will name only a few of the several items to illustrate that these are not typical objects a drug trafficker would carry): “a brown, striped cloth bag with one handle containing the following: a foreigner identity card, €95 in banknotes and €10.73 in coins, two library cards from Sant Cugat del Vallès, a Barcelona metro map, a TeaCard, a SOC employment application form, a payslip for the month of August, a calendar with white covers and various notes inside, a yellow ballpoint pen.”
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