

## MARABÚ, CHARCOAL, EXPORTS AND DOLLARS

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With the dismantling of the Cuban sugar industry beginning in 2000, approximately two million hectares of land occupied by sugarcane plantations, supplying 156 sugar mills throughout the country, became available for alternative uses. Government authorities decided to take out of sugarcane production over 1.3 million hectares, mostly in the eastern part of the country, while reducing the number of sugar mills to 71.<sup>1</sup> A decade and a half later, lands previously planted with sugarcane, pastures and rice have been taken over by the invasive shrub marabú (or “aroma”) and actually provide the raw material for the production of charcoal, a new export industry.

Raúl Castro, in a speech in Ciego de Avila in 2007 on the 26th of July Anniversary, made the following observation:

Arriving here by land I was able to see that everything is green and beautiful, but the most beautiful, which I could confirm with my own eyes, was how beautiful the marabú shrubs are all along the entire highway.

Elvira Fernández, from Ciego de Avila, confirmed General Castro’s views in an article written seven years later, in 2014.<sup>2</sup>

Today, marabú charcoal, or “carbón de aroma,” is a product that Cuba exports to the world. An interest-

ing point is that this new export product has played a role in the thawing of US-Cuba foreign economic relations. In January 2015, the U.S. Treasury Department amended its regulations governing economic relations with Cuba “to authorize the importation of certain goods and services from Cuba produced by independent Cuban entrepreneurs.” The objective was to stimulate the Cuban private sector and to support the ability of the Cuban people to gain greater control over their own lives and determine the country’s future.<sup>3</sup> Independent Cuban entrepreneurs were defined as “farmers cooperatives,” known as CCS (Cooperativas de Crédito y Servicios), and their product was allowed to be exported to the United States market per the amendment to regulations mentioned above. Cuba has sold hardwood charcoal to countries other than the U.S. for a number of years. Most of hardwood charcoal products have been exported to Europe, Africa and the Middle East since 2007. However, Cuban marabú charcoal is new to U.S. consumers as it began to be offered in Florida very recently, after it first arrived at Florida ports in January 2017.<sup>4</sup>

The purpose of this paper is to describe the new Cuban charcoal industry and the dollar revenues marabú charcoal exports could contribute to the country. It is very unlikely that marabú charcoal would have

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1. José Alvarez and Jorge Pérez-López, “The Restructuring of Cuba’s Sugar Agroindustry, 2000–2004,” in Pérez-López and Alvarez, editors, *Reinventing the Cuban Sugar Agroindustry* (Lanham, Maryland: Lexington Books, 2005).

2. Elvira Fernández, “Patria o marabú,” *14 y medio*, 21 de noviembre de 2014.

3. Jorge Pérez-López, “Marabú Charcoal: Piercing the Ban on Cuban Exports to the U.S.,” *THCG Business Report*, 2017.

4. Mimie Whitefield, “Charcoal—first legal cargo from Cuba in more than 50 years—arrives at Port Everglades,” *Miami Herald*, January 24, 2017.

been the object of an academic discussion had it not been for the Obama Administration relaxation of the Cuban embargo that allowed the exemption enabling U.S. companies to import Cuban charcoal.

### CUBAN CHARCOAL CONSUMPTION

The history of production of wood charcoal in Cuba can be traced back to pre-colonial times. Charcoal has been widely used as a traditional cooking fuel where other options have not been available. For example, in farms and the rural countryside it has been, and continues to be today, a staple source of cooking fuel. In addition it is used by many urban low- and middle-income families. However, with the increased availability of alternative energy sources such as electricity, propane gas or kerosene as cooking fuels, the use of charcoal has declined over time.

Fluctuations in the consumption of charcoal in Cuba are correlated with shortages in the supply of modern sources of cooking fuels. A household not having access to a modern source of cooking energy returns to the use of wood charcoal. Data for the period 2010–2015 (Table 1) shows that average domestic consumption was over 53 thousands tons of vegetable charcoal per annum.

**Table 1. Domestic Consumption of Vegetable Charcoal (1000 metric tons)**

	2010	2011	2012	2013	2014	2015
Vegetable charcoal	62.4	54.0	34.0	56.0	61.7	52.3

**Source:** Oficina Nacional de Estadística e Información, *Anuario Estadístico de Cuba, 2016*.

As discussed previously, the sharp reductions in the land devoted to sugarcane, pastures and rice resulted in many thousands of acres of soils becoming idle. Those large extensions of land soon became marabú forests. A plus of having land covered with marabu is that marabu is a leguminous plant that fixes atmosphere nitrogen, enriching the soil, and also prevents soil erosion.

The government did not have a sound management plan to condition the soils taken out of sugarcane, pastures and rice for further use, thereby creating the opportunity for marabu to proliferate. Clearing this

land for agricultural cultivation is a very difficult task, because eradicating marabú requires very hard work, very sharp tools and many hours of labor. Alternatively, chemical agents or mechanical machinery can be used to prevent marabu from spreading and to uproot it. Because Cuba did not have the necessary equipment or means to eradicate the marabú, tens of thousands of acres of idle lands were invaded by the shrub, eventually giving rise to the raw material for the marabu charcoal industry.

Using marabú as an input for charcoal production has short and long-term implications. In the short term, the government creates employment in the agricultural sector, cleans the lands of marabú and other debris, and increases employment in the centers where the charcoal is sorted and packaged for sale to consumers. The long term implications depend on what is going to be the use of the lands once the marabú has been removed. Land cleared of marabú or any other land laid bare will return to its previous state if it is not reconditioned. Repurposing the land for another productive endeavor will require a soil management plan, tools, equipment, time and financial resources. The ideal situation would be for CCS cooperatives, with the assistance of the Ministry of Agriculture, to develop a soil management plan, that would reconstitute the soil so that it can be put to other productive use and increase the production of agricultural staples for domestic consumption or exports.

It should be noted that the Cuban government sought assistance from abroad in 2008 to address the management of idle lands. The assistance was connected to a reforestation project with the International Model Forest Network (IMFN) in Ottawa, Canada. The reforestation project, named “Sabanas de Manacas Model Forest,” covered 20.4% of the total territory of the province of Villa Clara; 34% of the land under the project was covered by marabú.<sup>5</sup> The project objectives were:

1. removing marabú weed and restoring the land.
2. recovering the capacity of some areas with agricultural potential by introducing agricultural crops and livestock.

3. supporting local communities in the production of charcoal from marabú weed using artisan ovens.

No additional information is available from the IMFN on the project. It is not known if the intervention by IMFN produced any significant results in Sabanas de Manacas region.

### CHARCOAL PRODUCTION

The raw material most commonly used to produce charcoal in Cuba and other countries is hard woods, such as citrus trees, mangroves, and tree scraps. Marabú is a relatively new raw material in charcoal production. What makes marabú valuable as a raw material for charcoal are the properties of the charcoal made from it, among them: clean and slow burning, high caloric value and hardness. Marabú charcoal is less harmful to the environment. When it burns, it does not produce a strong smell like anthracite or bituminous coal.<sup>8</sup> It is preferred in Europe over other types of charcoal or energy to stoke ovens in the food and bakery industry.

The Cuban government provides lands populated with hard wood or marabú to cooperatives to produce charcoal. The labor to cut, stack and prepare charcoal ovens is provided by the members of the cooperatives workers. Once the charcoal is made, it is transported to a benefit center, where it is sorted, sized, sealed, and packaged in 20 kg polypropene bags to get it ready for shipment to the final domestic destination and some of it for sale abroad.

### REMUNERATION OF CHARCOAL WORKERS

Cuban charcoal makers, or “carboneros,” are members of the CCS, organizations that are supposedly privately-owned and run. In reality, CCS are under government supervision and control.

It has been reported that to produce 1.5 metric tons of charcoal, 4 metric tons of wood are needed.<sup>6</sup> The labor input of the carbonero is at least 2/3 of the effort to produce the final product. How many days of hard labor does it take for a “carbonero” to achieve his goal of producing a batch of charcoal? A variable to take into consideration is method employed for cutting the wood. If a “machete” and an ax are used, the carbonero must have good files to sharpen the instruments and likely it will take several eight-hour days to cut the wood. If a mechanical chain saw is used, the carbonero will reduce substantially the number of days to produce the needed amount of wood. Once the wood is cleaned and collected, the next tasks are stacking and pile preparation. The pile will smolder for 10 to 12 days to become charcoal, depending on the size of the pile.

A recent report from Cuba provided the following information: “In Jiguaní, Granma province, there are 41,000 ha infested with marabú devoted to charcoal production. Daily production is 1500 sacks and the potential is for 15000 sacks per year. The workers receive a monthly payment of 1500.00 CUP in addition to an additional incentive of 60 CUC.”<sup>7</sup>

Carboneros are paid in CUPs, receiving wages determined by the state agency receiving the charcoal, and depending on the quality of the coal produced by the cooperative. An article about the Ceballos charcoal enterprise in Morón, Ciego de Avila province, published in *Granma* on October 4, 2016, states that an incentive for working in charcoal production is that a worker can earn over 8,000 CUP a month. Reportedly, the enterprise has received almost 65 million pesos (or \$2.6 million CUC) from exports of marabú charcoal since 2005, making it the nationwide leader in the sector.<sup>8</sup> A charcoal worker at the enterprise confirmed the previous statement about remunera-

5. Sabanas de Manacas Model Forest, International Model Forest Network, *Managing the invasive Marabou weed in Cuba: How to make the best of the worst*. See: <http://imfn.net/sabanas-de-manacas-model-forest>. Ottawa, Ontario, Canada, 2017.

From Alcarbon Website, <http://www.alcarbon-cu.com/aboutus.html>. Alcarbon is a charcoal company located in Panama that specializes in the export and distribution of vegetable coal of marabú and other mixtures of hard and semi-hard woods, all of Cuban origin.

6. Alcarbon Website, <http://www.alcarbon-cu.com>.

7. Cuba, National Television Network, Afternoon edition, June 28, 2017.

8. Ortelio González Martínez, “Charcoal making: No easy task,” *Granma*, October 4, 2016.

tion, stating: “Before, I worked with other enterprises even from Camagüey, but since I began working... [here]... I have not wanted to work for anyone else. In one month and five days (35 days) I can earn 8,000 pesos.”<sup>9</sup> However, the assertion that a worker can earn 8000 CUP per month appears to be an exaggeration because that income level is well above the recently-published average salary scale for 2016 by the National Statistical Office. The scale indicates that the highest average monthly salary for Cuban workers is 1250 CUP.<sup>10</sup>

Rafael Cedeño a charcoal worker of the Empresa Forestal provided the following information about the work they do: “We have to guarantee one oven (parva) per month, which provides 100 sacks, and they pay us at the rate of 0.60 cents per kilogram. The sack is worth 12 pesos or 0.48 CUC, in addition there is a discount for transportation and five per cent taxes.”<sup>11</sup> From the information provided by Cedeño the state enterprise pays 600 pesos per ton, equivalent to 24 dollars.

While they earn a good salary in pesos compared with other professionals, it is not clear that carboneros can markedly improve their standard of living by having more pesos. The evidence is that the system is unable to provide them a better standard of living because of: (a) the lack of available commodities in the consumption stream; and (b) in order to spend the extra pesos over and above available consumption in the peso market, the worker will use the black market to acquire what it is not offered in the state store. Consequently, the system forces those individuals to operate on the fringe of society to improve his/her standard of living.

## EXPORTS AND EXPORTERS OF CHARCOAL

The Cuban marabú charcoal that arrived in the United States in January 2017 was sold to Coabana, a U.S. company, at \$420 per ton, which is the highest price achieved by CubaExport in over 10 years marketing this product. It normally sells in the international market for between \$340 and \$380 per ton. The official from CubaExport who negotiated the transaction indicated that “with the U.S., we were able to get a higher price.” The negotiator further indicated that the local packer and Cuba Export will earn a commission of 1% to 2% from the sale of the charcoal.<sup>12</sup>

Reports from other charcoal-producing centers in Camagüey and Las Tunas indicate that international sales of charcoal have been taking place for a number of years to other destinations.

- Juan Carlos Rodríguez, representative of the Spanish firm Ibecosol S.L., imports marabú charcoal from Empresa de Flora y Fauna, headed by Comandante Guillermo García Frías. Rodríguez referenced purchasing 140 tons of charcoal of prime quality priced at \$330 dollars per ton.<sup>13</sup>
- The Ceballos Agroindustrial Enterprise, in Camagüey province, produces marabú charcoal since 2005. It is considered a leader in this sector with units in Las Tunas, Camagüey, Ciego de Avila and Sancti Spíritus.<sup>14</sup>
- Angel Almeida Consuegra, subdelegate of the Ministry of Agriculture in Camagüey, reported that at the conclusion of the first trimester of 2017, the area had exported more than 2,967 tons of vegetable charcoal, valued a total of 975,000 CUC, of the total 3,906 tons forecasted

9. Ibid.

10. ONEI, Oficina Nacional de Estadística e Información, *Salario Medio en Cifras, Cuba 2016*. “Salario Medio Mensual por Clase de Actividad Económica.”

11. Alberto Méndez Castelló, “Vengan señores comerciantes, en Cuba los generales esperan por ustedes,” Cuba Net, Junio 17, 2017.

12. Mimi Whitefield, “Charcoal-first legal cargo from Cuba in more than 50 years-arrives at Port Everglades,” *The Miami Herald*, January 24, 2017.

13. Alberto Méndez Castelló, op. cit.

14. Ortelio Gonzalez Martinez, “Charcoal making: No easy task,” *Granma*, Octubre 4, 2016.

for the year. In 2016 the province exported 3,311 tons valued at over 1,050,000 CUC.<sup>15</sup>

- Cuba exported 80,000 tons of marabú charcoal to Europe and South America in recent years. The sale prices oscillated between \$270 and \$300 dollars per ton. The revenue generated amounted to \$21 to \$24 million dollars. In Las Tunas in 2016, revenues from the sales of charcoal to the United Kingdom and Germany were above 1.0 million CUC.<sup>16</sup>
- In addition to CubaExport, Cuban charcoal is also marketed by several companies and brokers, among them Cimex, Cítricos Caribe, Alibaba, Alcona S.A., and Cuba Marabu (from Jaruco region of Las Tunas using an agent in Turkey). Coabana Trading/Holdings LLC, a subsidiary of Reneo Consulting, LLC, is the U.S. company that has imported marabú charcoal into the U.S. for sale under the FOGO label. Meanwhile, Ibecosol began to market Cuban charcoal since 2007 and operates a charcoal processing plants in Ciego de Avila, Granma, Jobabo, and Las Tunas.
- Panamanian company AlCarbon, S.A maintains a subsidiary in Cuba. The company indicates that they have been exporting to several countries since May 2010 and have made market in-

roads in Turkey, Greece, Italy, Spain, Saudi Arabia, Jordan and Lebanon. Meanwhile, efforts are currently underway to branch out sales to the UK and German markets.<sup>17</sup>

## CONCLUDING REMARKS

In its effort to obtain convertible currency to improve its external economic position, Cuba has turned to the production and exports of marabú charcoal as a source of convertible currency. According to official estimates, over one million hectares of land have been invaded by marabú, and 20% of the island's arable land is covered this invasive shrub. In the province of Las Tunas alone, over one hundred thousands hectares are infested by marabú.<sup>18</sup> It should be noted that while it is considered a pest, marabú has the positive effects of preventing soil erosion and desertification.

Evidence indicates that Cuba has been exporting hard wood charcoal for many years. Since 2005, exports of marabú charcoal have become significant, destined mostly to European countries. The idling of sugarcane lands since around 2000 has provided the opportunity for marabú to expand and become a readily-available raw material for charcoal production and exports.

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15. Yahily Hernández Porto, "Incrementan producción de carbón vegetal," *Juventud Rebelde*, Junio 18, 2017.

16. Alberto Méndez Castelló, op. cit.

17. Irene Pérez, "Carbón de marabú: Primer producto que Cuba exporta a EEUU en 50 años," *Cubadebate*, January 5, 2017.

18. Alberto Méndez Castelló, op. cit.