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Rent seeking and institutional entrepreneurship at Colombia's Cauca Valley Corporation

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**RENT SEEKING AND INSTITUTIONAL ENTREPRENEURSHIP AT COLOMBIA'S CAUCA VALLEY
CORPORATION**

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ABSTRACT

In this paper , we analyze the rent seeking behavior and the development of institutional entrepreneurship of the Corporación Autónoma Regional del Valle del Cauca (Cauca Valley Corporation, CVC or “the Corporation”, an institution founded in 1954 as a regional entity dedicated to developing water resources, but also involved as a major actor in managing and conserving natural resources. In the context of decentralization and institution building, we consider rent seeking as a phenomenon related to the concept of institutional entrepreneur, a recent construct of both economic and sociological research, which can be linked the Coasian ideas of the emergence of the firm from chaotic exchange . Our analysis suggests that the combination of rent seeking and institution building motivations led to a progressively benign evolution of CVC, even though it also meant a drastic reduction of its political power.

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**RENT SEEKING AND INSTITUTIONAL ENTREPRENEURSHIP AT COLOMBIA'S CAUCA VALLEY
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1.Introduction

Rent seeking is a relatively recent concept, developed by economists (see, in particular Buchanan, Tollison and Tullock (1980)), which focuses on the resource wasted to secure privileges (rents) through lobbying and political relations by individuals, interest groups or organizations. As such, rent seeking is not necessarily identified with the behavior associated with an institution that claims its own space and tries to carve its own action, but the institution itself may become a willing instrument in the hands of interest groups trying to do so. Because public institutions depend for their existence on the public money that they receive, lobbying for a broader mandate, larger appropriations and other similar phenomena is, within limits, a physiological activity, and rent seeking is essentially limited if not eliminated by competition for scarce funds among similar institutions and between the public and the private sector. In a sense, the government can itself be seen as one of such institutions and so are the other political bodies, all competing for power over resources. Agency theory in this respect maintains that the main problem of inefficiency of institutions is due to the fact that their principals (for example, the general public in the case of a public institution) have different objectives from their agents (the institutions and the bureaucrats working for them), so as in the case of the firm, the main allocation problem arises from the dis-alignment of objectives of these two stakeholders. In a similar way the managers of a company try to increase their privileges at the expenses of their shareholders. By combining the notion of rent seeking with the more recent theory of the “institutional entrepreneur, we will argue, however, that CVC sought to broaden and strengthen its mandate, by ordering and reorganizing property rights in its area of influence , and by decentralizing government action, to the extent that it went far beyond a normal self-legitimizing and fund securing series of actions. Moreover, the far reaching nature of CVC’s influence on environmental regulations and policies secured continued and expanding power to selected interest groups. Finally, the enlargement of the institutional powers and the role of special interest groups created a situation of likely misalignment of the objectives of the institution as an agent for the general public.

We will also argue that these phenomena were not the result of a conscious design from an evil elite, but followed the institutional dynamics that characterized Colombia in the past 75 years. In this period, in fact, institutional developments in Colombia was largely based on governance models imported from the USA and from the European countries. These models, which called for decentralized government and locally based institutions, were dramatically inadequate, because of the lack of a tradition of civil society involvement in most areas of the

country, and the preponderance of the opposite tradition of dominance from the local elites. As a consequence, the new institutions were often themselves the product of promotion of the local elites and may have been captured by local interest groups.

2. Rent seeking behavior and economic efficiency

During the 19th century, economists used the word “rent” to refer to the economic returns to land. This traditional definition was later extended and rent came to mean returns to a factor that had (like land) a fixed supply. Gordon Tullock (1967), who famously observed that rents attracted resources and Anne Krueger (1974) initiated the rent seeking literature, which was further developed in several papers edited by Buchanan, Tollison, and Tullock (1980).

In its influential paper, Krueger (1974) used “rent” to refer to the artificial returns to a factor input that was fixed in supply by an act of government. She illustrated her point using the government-imposed limit on the supply of “medallions” needed to legally operate taxicabs in New York City.¹ She also pointed out that rents are frequently created by political actions that interfere with competitive markets. Examples of these actions are government subsidies to farmers. In an analysis of a U.S. program to subsidize irrigation water, Rucker and Fishback (1983) calculated the rents received by farmers who purchased water from the Bureau of Reclamation at rates much below the cost of delivering the water. Other examples of rent creation involve monopoly power. “Monopoly rents” are created when a group lobbies successfully to gain access to property rights through tariffs or governmental regulations that privilege the group. For example, monopoly rents are created when a group of industrialists or farmers attains privileged access to water rights or exclusive access to low-cost electricity.

Another type of rent is linked to the privileges and perquisites of government workers who administer government programs that create rents. “Administrative rent” exists when these programs allow government personnel to obtain more job related perquisites than they would normally as a result of their professional skills. These rents can take the form of relatively high employment stability, salaries, and travel opportunities.

“Rent seeking” occurs when organizations or individuals engage in activities to create, maintain, or increase rents (Buchanan, Tollison and Tullock, 1980; Tollison and Congleton, 1988). An example of rent seeking is the lobbying by U.S. farmers to maintain Bureau of Reclamation programs to subsidize irrigation water. A related example involves the effort of Bureau of Reclamation employees to enhance their power by expanding their control over how subsidized irrigation water is allocated (Rucker and Fishback, 1983).

As Duflo et al. (2005) have recently argued, decentralized government may, at the same time, be more efficient and more rent seeking than centralized government. On one

hand, decentralized governments may be better at eliciting people's preferences, but it is also more likely to be captured by local elites and politically powerful groups. Furthermore, minorities may be at disadvantage due to their local lack of representation, power or recognition, as compared to their national weight and can thus be less able to claim a fair share of the public goods.

More recently, in a rather controversial set of writings, two social scientists from MIT, Acemoglu and Robinson (2011, 2012, 2013), have argued that successful development is the consequence of political institutions allocating power to groups with interests in broad-based property rights enforcement, and creating effective constraints on power-holders, and of there being relatively few rents to be captured by power-holders. This systemic view of rent seeking gives it much more weight as a force that shapes institutions and ultimately the destiny of society and is more linked to the so called "extractive" activities of the ruling elites.

The evidence on extractive rent seeking by local elites, however, is also controversial. For example, Markovitz (2008) examines the politics of local government in Uzbekistan, and identifies two rent-seeking extractive strategies among local procurators. At the same time, its examination of case study material from the two provinces of Samarkand and Navoi demonstrates how concentrated economic resources under rural elites and dense patronage ties to regional politicians determine limits on the practicable amount of rent seeking. Thus, extractive activities are, at the same time, exploited and limited by local rulers and the resulting shape of governance and power intimately local.

In a more far reaching use of the concept, Dwayne Woods (2004) argues that rent seeking behavior in the cocoa sector in Ghana and Ivory Coast explains most of the development strategies and the political outcomes in both countries. Both local elites and rural producers were united, during the boom period, in seeking to exploit the rents from cocoa. Thus, they set about gaining a political monopoly at the local and national levels, resulting in the emergence of single-party regimes. Local elites also established marketing boards as a way of maintaining a monopoly of the commercialization of cocoa. Finally, elites attempted to use the rent from cocoa to spur some form of industrialization.

The cocoa case is generalized by several theoretical models of rent seeking and lower growth that are related to the abundance of natural resources (the so called "resource curse"). For example, Tornell and Lane (1999) identify the so called "voracity effect" as the possibility that a windfall gain, such as a commodity boom or increased oil revenue, may lead to intensified rent-seeking and resource waste. Baland and Francois (2000) and Torvik (2002) model the nexus between increased income from a natural resource and reallocation of human capital from productive entrepreneurship to rent seeking. Hodler (2006) models resource wealth and social divisiveness as the cause of weaker property rights protection, higher rent-seeking, and lower economic performance.

Although to our knowledge, the two concepts have never been put together, the model of the "institutional entrepreneur", a recent construct of both economic and sociological research (Pacheco, York, Dean and Sarasvathy, 2010) has emerged as a sort of subjective counterpart of rent seeking. The label "institutional entrepreneur (IE)", in fact, is typically used in economics

to denote a self-interested actor who pushes for institutional changes in order to gain economic benefits (Anderson and Hill, 2004; Li, Feng and Jiang, 2006; Henrekson and Sanandaji, 2011), and in sociology, as an actor who mobilizes resources to change or establish institutions in a way aligned with her interests (DiMaggio, 1988; Dacin, Goodstein, and Scott, 2002; Levy and Scully, 2007). While the concept of EI does not necessarily coincide with that of a “rent seeker”, its physiognomy is clearly complementary to rent seeking in that it helps to establish the characteristics of the institutional subjects (lobbies, agencies, monopolistic associations) that engage in activities devoted to obtain entitlements, rights and privileges over a given, material or immaterial, territory. Furthermore, as we will try to show in the paper, public institutions , mediating between centralized and decentralized government powers, are especially prone to transform themselves in EIs, as a consequence of their ambiguous status of national and local stakeholders, the political nature of their relationship with their own constituency and the various levels of government, and the search for institutional power and stability.

3. CVC development and rationale

The *Corporación Autónoma Regional del Valle del Cauca* (Cauca Valley Corporation, CVC or “the Corporation”) was founded in 1954 as a regional entity dedicated to developing water resources. In addition to building hydroelectric power, irrigation, flood control, and drainage projects, CVC has also been involved in managing and conserving natural resources. It was the first regional autonomous corporation established by Colombia's national government. As illustrated in Figure 1, the Corporation’s jurisdictional area covers the upper Cauca River basin.

CVC’s original model can be traced back to the famous Tennessee Valley Authority (TVA), whose former chairman, David Lilienthal, visited Colombia in early 1954, at the invitation of the President and at the end of its long visit in June 1954 submitted a report recommending the creation of an agency modeled on the TVA original conception as well as experience. Soon after CVC was created with its own funding from a local tax on real estate, with the right of eminent domain and with an explicit mandate to modernize the economy of the valley, which had been dominated by large landlords (Rheinard, 1988). The choice of TVA as a model mirrored the rise of similar organizations in a variety of countries, such as the *Cassa per il Mezzogiorno* in Italy , where the World Bank was instrumental in helping create a development agency as a local partner and a force of modernization and technical progress. The TVA, which was created in 1933 by an act of the US Congress, is a combination of a utility and a powerful development agency, with a proactive tecno-structure, capable to develop its own local power base through benefit sharing and political connections. Unlike TVA, however, CVC was originally opposed by the landed class as an instrument of the urban-industrial bourgeoisie to force innovation on the traditional local elite (Hirschmann, 1963). Only after a fierce political and social struggle, a compromise was reached by letting the original landlords claim most of the benefits from infrastructure projects, and by financing these with national and international capital rather than by land taxes (Rheinard, 1988). This compromise gained to CVC a powerful local constituency , but, at the same time , provided the landed elite the opportunity to innovate and

develop traditional agriculture, using CVC as an institutional instrument to channel resources into the valley and ultimately gain rents through political and economic influence.

Between 1968 and 1993, CVC had a major influence on the development of Colombia's decentralized environmental management system. The performance of CVC indicated that a decentralized approach in Colombia could have advantages over traditional centralized environmental management schemes. This demonstration of advantages ultimately contributed to the creation of 34 autonomous regional corporations that were made responsible for implementing Colombia's environmental protection policies (DNP, 1991; Tlaiye and Biller, 1994, MMA, 2002, Sanchez-Triana, Ahmed and Awe, 2007).

During the 1980s, CVC pioneered work in EIA in Colombia (Sanchez-Triana and Ortolano, 2001). In that decade, CVC also designed and implemented Colombia's most successful industrial water pollution control program (World Bank, 1989; Carrasquilla and Morillo, 1994; Tlaiye and Biller, 1994, Sanchez-Triana and Ortolano, 2006). Furthermore, the water pollution control regulations adopted in Colombia in 1984 (by Decree 1594 on wastewater discharge standards) and the water pollution charges established in 1993 (by Law 99 of 1993) were modeled after the CVC's regulations on wastewater discharge standards and water pollution charges (Sanchez-Triana and Uribe, 1995; Arias, 1997b; Saavedra, 1997, Sanchez-Triana and Ortolano, 2006).

Our research, which is based on archival information at the CVC, National Planning Department, Ministry of Finance, as well as and a review of the literature, interviews with 28 industrialists, farmers and officials of CVC and other Colombian agencies, investigates why and how CVC implemented its environmental impact assessment (EIA) and water pollution control programs through 1993. The organization was fundamentally transformed in that year because its electric power operations were shifted to the Pacific Energy Utility (*Empresa de Energia del Pacifico*, EPSA), a newly created electric utility.

Current narratives aimed to explain CVC's environmental regulatory activities center on the following: (1) the Board of Directors's sense of social responsibility; (2) the leadership and charisma of Raúl Arias, Chief of CVC's water pollution control unit; (3) the influence of international development assistance organizations; and, (4) "organizational slack" at CVC. While these narratives may have some merit in explaining the rationale that different actors recognize in the existence and the dynamics of the institution, in this paper we argue that CVC's EIA and water pollution control programs also reflect "rent seeking" by coalitions and individuals affiliated with CVC. Because the role of Cauca Valley elites is central to our analysis, we begin by introducing those elites and their influence on the organization.

4. INFLUENCE OF ELITE FAMILIES ON CVC

The Cauca Valley is one of Colombia's most productive agricultural regions. For generations, the principal land owners in the Valley have been of high social status and they have held economic and political power (Jackson, 1972; Fals Borda, 1996). Since colonial times, a small number of families have owned much of the best agricultural land. Those families have lineages can be traced to the Spaniards who conquered southwest Colombia (Posada and Posada, 1966).

After the creation of CVC, a major transformation took place in the valley, where large agricultural producers massively changed from large cattle to sugar cane farming, cotton, irrigated rice, sesame, sorghum, soybeans and corn for feed. The number of cattle fell from 818,000 in 1954 to 440,000 only three years later (Rheinard, 1988). Sugar cane producers and sugar refiners were specially well represented in the National Association of Sugar Cane Growers (*Asociación Nacional de Cultivadores de Caña, ASOCAÑA*), an organization created in 1959 to represent Colombia's principal producers of sugar cane. Several prominent land-owning families also participated in developing the region's industrial economy, which is based on the cardboard, chemical, printing, and sugar-refining industries (Jackson, 1972, Posada and Posada, 1966). These families helped establish the powerful National Association of Industries (*Asociación Nacional de Industriales, ANDI*) (Posada and Posada, 1966).

Before 1985, about 87,000 hectares, which constituted 24 percent of the river valley, were flooded annually, and another 15,000 hectares were subject to periodic floods. Beginning in the 1920s, Cauca Valley industrialists and agricultural landowners supported studies of projects to control the Valley's flooding and drainage problems, and to supply energy for their increasingly significant economic activities (Jackson, 1972). During the 1950s, the Valley's most prosperous landowners and industrialists began lobbying for creation of the CVC, an organization that was to be modeled on the Tennessee Valley Authority in the United States (Posada and Posada, 1966). They envisioned the CVC as an entity that developed water resources projects to foster agricultural and industrial development in the Cauca Valley (Arboleda et al, 1981).

When CVC was created in 1954, its first Board of Directors consisted of members of the Cauca Valley's elite families. In 1957, soon after the military committee took over the dictatorial government of Gustavo Rojas Pinilla, CVC was criticized as being non inclusive, with an overrepresentation of local influential families which were also favoring the regime. To respond to this criticism, the military committee expanded CVC's Board to include representation from various interest groups. Between 1957 and 1993, CVC's Board included governors of the two departments within the Corporation's jurisdiction, and representatives of sugar-plantation owners, the Association of Cattle Ranchers and Farmers, the industrial sector, and the Cauca Valley newspaper (Posada and Posada, 1966).

The Board's duties included approving the annual budget; selecting the projects to be undertaken; and adopting rates and regulations for services, such as electricity, provided by CVC

(Arboleda et al., 1981, DNP, 1981). The Board appointed the first executive director on its own. Between 1968 and 1993, the President of Colombia was formally in charge of appointing CVC's executive director, but in reality (until 1991), the appointment was made upon the suggestion of the Cauca Valley influential families.

Many of CVC's executive directors have been from prominent Valley families. In 1954, the Corporation's first executive director was Bernardo Garcés Córdoba, the owner of large farms and companies in the Cauca Valley (Posada and Posada, 1966). He served until 1968, when he was replaced by Henry Eder Caicedo, who owned Cauca Valley sugar-cane farms, sugar mills, and other companies (Jackson, 1973). Oscar Mazuera, who was Eder Caicedo's assistant, took over the post in 1976 and served until 1991. This job stability contrasts sharply with traditional spoil system practices in Colombia, i.e., securing influential positions to members of the governing political party, in exchange for their electoral votes and political support (Leal, 1989).

Before 1991, members of the Valley's prominent families controlled the executive director position without any significant challenge from other groups or constituencies. After 1991, however, the local elites' ability to select the executive director weakened. Electricity outages across Colombia in 1992 and 1993 led the President to fire directors of various electric utilities and the CVC executive director was among those fired. Soon thereafter, the President appointed an executive of the Carvajal Printing Company, and he served as CVC executive director until 1994, when he was appointed as the first executive director of EPSA, the utility created in 1993 to take over CVC's electricity operations.

5. RENT-SEEKING BEHAVIOR

While the point of departure of Tullock's (1967) classical argument was on the relationship of rent seeking and monopoly, his main contribution has been on the inefficient aspects of the rent seeking industry and its unexpected small size, mostly justified by the dissipation of rents occurring in a weak democracy. Thus, while an absolute monarch is able to trade off his power to confer monopoly privileges and takes the rent seeking outlay as a personal transfer, a weak democratic government would be "... incapable of imposing its will on the bidding process for the monopoly that it is purveying and (would be) vulnerable to competitive bidding for the rent creating mechanism from other would be governments." (Tullock, 1988). According with this interpretation, rent seeking can be conceived as a model of imperfect monopoly seeking, where a form of monopoly rent is secured by the seekers, whose privileges, nevertheless, fall far short of the rents of a pure monopoly, because most of them are dissipated as lobbying costs or other means (such as enacting inefficient projects).

CVC's actions for establishing its EIA program can be conveniently described within the economic model of rent-seeking for three related reasons.ⁱⁱ First, CVC aimed to obtain substantial subsidies for the large agricultural producers and local industrialists who formed the bulk of its constituency, by promoting, re-modulating and making politically acceptable the very expensive and inefficient Corporation's Salvajina Hydroelectric Project. Second, as an instrument to obtain further privileges, CVC successfully lobbied to take over burdensome and costly environmental regulatory functions that would normally have been assumed by the National Institute of Natural Resources and the Environment. (*Instituto Nacional de los Recursos Naturales y del Ambiente*, INDERENA). Finally, CVC's officials in the Water Pollution Control Section (WPCS) appropriated part of the rents obtained in the form of tenured positions with large increases in incomes, budgets, staffs and equipment. All these actions thus appear to follow Tullock's paradigm, in that they combine successful efforts to secure privileges with substantial dissipation of the potential rents through inefficiencies. Following the analysis of these three concurrent activities, we analyze shifts at CVC that involved creating and expanding its EIA program. We also evaluate the influence of EIAs submitted to CVC from 1976 to 1993.

Table 1. Rents and Rent Seekers

Actors	Rents	Rent seeking
Regional elites represented by CVC board members	Stable and uncomplicated access to water rights and water allocations; access to outputs from water resources projects (e.g., Salvajina) at subsidized (i.e., below market) prices.	Propping up the Salvajina project by modifying it to emphasize water pollution control benefits.
Top level engineering staff at CVC	Rents linked to providing huge contracts to the major construction companies that build CVC projects; maintenance of jobs with high prestige and salaries	Starting up a water pollution control section at CVC and initiating an EIA program.
Water Pollution Control Section officials.	Tenured positions, plus increased staff size and budget	Expanding the water pollution control and EIA programs at CVC.

5. EFFORTS TO JUSTIFY THE SALVAJINA DAM

CVC's initial motivation for regulating water pollution was its need to justify the Salvajina Hydroelectric Project. To a lesser extent, the same stimulus explains CVC's initial involvement with EIA. Salvajina, CVC's most important project between 1954 and 1993, was the largest source of Colombian taxpayer subsidies and income transfers to flow to the Cauca Valley's wealthy agriculturalists and industrialists.

The Salvajina project consists of a 505-foot high rock-fill, concrete-face dam located in a narrow gorge of the Cauca River, at the southwestern entrance of the upper Cauca Valley (Figure 1). With a proposed electric power generating capacity of 270 MW, Salvajina was originally promoted with power generation as its principal goal (DNP, 1980).

In 1963, the World Bank began advocating the idea of interconnecting the Bogotá, Medellín and Cali power systems. The Colombian government adopted this World Bank recommendation and deferred the construction of new power generating plants while the grid was being created. After the CVC, Medellín and Bogotá systems had been interconnected, the World Bank began financing power projects it deemed most economical, regardless of location. This was problematic for the Salvajina Project, which, with a unit cost of \$1,667 per kilowatt, was more than twice as expensive per kilowatt as other projects, such as Betania and San Carlos (Roa and Blanco, 1986: 42). Under the circumstances, officials of the National Planning Department (*Departamento Nacional de Planeación*, DNP) eliminated Salvajina from the project schedules of the national government and the World Bank (Reveiz, 1977: 357).

Reinventing Salvajina as a Multipurpose Project

As in most Latin American countries, the distribution of land in the Alto Cauca is a legacy of colonial times, and its concentration is high even by national standards. Moreover, land titled for the ethnic population (the non large farmers) is less than 30% of the land in Cauca Department (Gamarra, 2007) and its quality is poor in terms of its accessibility and fertility.

In this context of land concentration and widespread poverty, the Salvajina project introduced a vision of development having as chief beneficiaries the main constituents of CVC, that is, large landholders and food industrialists. While the economic parameters of the project were at least dubious, the acquisition of these benefits from the local elites required also a radical geographical transformation based on further land expansion for agriculture and livestock, and power generation to support the industry and a growing urban population. The large farmers (the Gini coefficient for land is in the neighborhood of 85%, Gamarra, 2007) centred their interests on the Cauca river as both an obstacle to land expansion and as an opportunity to generate electricity and water services. However, the fact that project cost estimates were high as compared to other projects and also implied negative benefits for the downstream communities because of the diversion of the river, constituted a challenge that demanded either a cancelation or a drastic redesign.

Instead of canceling Salvajina, CVC contracted a Canadian consulting company, Acres International, to redesign Salvajina as a multipurpose project, one that included land reclamation and flood control as well as power generation (Millan and Mejia, 1976; Reveiz, 1977). Reduced flooding would decrease the spread of water-borne diseases – a project outcome that would yield monetizable public-health benefits. Eventually CVC also decided that

Salvajina could provide water-quality benefits: reservoir water released during dry periods could augment downstream flows, thereby further diluting wastewater releases to maintain high stream dissolved oxygen levels (DNP, 1978; DNP 1980).

To justify water-quality benefits from Salvajina, CVC needed a water-quality goal for the Cauca River and a program to regulate water pollution. In 1968, CVC temporarily contracted a young sanitary engineer, Raul Arias, to design a water pollution control program. That same year, with assistance from the Pan-American Health Organization (PAHO), professionals in CVC's Hydrology Section initiated a water-quality study of the Cauca River (Arias, 1997b). Simultaneously with the hiring of Arias, CVC continued trying to obtain DNP's approval for Salvajina since, without it would not have been eligible to obtain international credit funds.

CVC's approach was to present DNP with a reformulated Salvajina project having two main objectives: controlling floods, and enhancing water quality by augmenting low downstream flows. The project's secondary objective was to provide 180 MW of electrical generating capacity. According to the Corporation's new Salvajina proposal, the agricultural sector and polluting industries collectively would pay at least one third of project costs, and the electrical sector would pay the remainder (DNP, 1978; DNP, 1980). In 1978, the CVC signed Agreement No. 21 to carry out the Project for Regulating the River Cauca, ratified by the national government through CONPES (Council of Economic and Social Policies) in November of that year. In addition to controlling floods in the valley's flatland for agro-industrial use and to reduce river contamination during periods of low water due to dilution of the sediment (CVC, 1985), the project aimed to produce 270 MW of electricity as part of the interconnected energy system (Quintero, 2010).

The project was based on the construction of a major infrastructure: the Salvajina dam in the municipality of Suarez. Not only it was comparatively much more costly than similar projects, but had also perverse income distribution characteristics. At the same time, in fact, while promising big advantages and, indeed rents, to large farmers and industrialists, it was planned in a way that implied the grabbing of water and land from historically impoverished and marginalized communities (McDonald-Wilmsen and Webber, 2010). This planning resulted in a controversial purchase of land that started in 1979 and ended with the flooding of Salvajina during the first three months of 1985.

Evidence for Existence of Rents

Between 1977 and 1985, the CVC's Board and its Executive Director worked to obtain the equivalent of economic rents for industries and land owners receiving flood control, water quality and land reclamation benefits from the Salvajina project. As explained below, activities undertaken to create and maintain these rents include the initiation of an EIA program and the creation of a water pollution control section at CVC.

In 1980, CVC urged modification of the original plan to recover one third of project costs from agricultural landowners and polluting industries. Under the new plan, which the DNP approved, the electricity sector's share of costs increased from two thirds of project cost to 92%. The remainder was to be paid by the agricultural sector and polluting industries (DNP, 1980: 4). Farmers benefiting from flood control and land reclamation works would pay 6.5% of project costs, and polluting industries would pay 1.5%. Money from industry would come through payment of wastewater discharge fees (DNP, 1980: 2).

As of 1978, Cauca Valley farmers were supposed to pay \$101 million of Salvajina's costs to cover the flood control and land reclamation benefits they would receive (DNP, 1978). Eventually, CVC recovered \$3.32 million of those costs. Agricultural landowners obtained rents amounting to \$96.68 million (in 1978 US dollars): the difference between the costs originally allocated to cover agricultural benefits from the project and what farmers actually paid. According to CVC (Colombia Information Center, 1983: 3), Salvajina's costs were not charged fully to landowners because the reservoir was not large enough to control periodic floods. Landowners had to invest more than \$40 million (in 1982 dollars) for levees and pumping stations to have a fully effective flood control system in the Valley.

Landowners in the Cauca Valley obtained Salvajina's flood-control benefits while paying less than 4% of project costs. Contrary to what CVC had originally proposed, none of the revenues from the CVC's new water discharge fee system went to pay Salvajina's costs. By 1984 the energy sector's share of project costs exceeded 95% (CVC, 1985b).

Moreover, forced migration, generated by the flooding of about 6000 has from the Salvajina, became an incentive to settle in the district of Aguablanca, where non-regulated urban developers had already occupied the floodplains. This district grew rapidly and became extremely populous over the years (more than one million people), allowing land owners to make extraordinary gains from urbanization.

Activities of CVC's Board of Directors and employees in connection with the Salvajina project are consistent with Posada and Posada's (1966: 198) general observation that a large percentage of the time of CVC managers and consultants

was spent on the preparation of special reports and on trips to Bogotá in order to aid the Board of Directors in refuting arguments against... the order of project priorities put forth by... the Ministries of Development, Finance, and Agriculture. CVC officials were also involved in making contacts and lobbying key central officials, congressmen, and party leaders – to use whatever personal, family, or political influence they might have in getting support for passing the crucial financial legislation and in persuading public, private, national, and international financial agencies to provide capital through loans for the electric power and reclamation projects.

Another motivation for implementing hydroelectric and reclamation projects like Salvajina is linked to a process of internalization of rent seeking on the part of CVC. As an

institution operating in a territory of uncertain norms and weak democratic government, in fact, CVC at the same time lobbies to obtain privileges for its constituents, who are at the origin of its creation, but also exercises an autonomous activity to expand and consolidate itself, as well as to extract rents to enhance its power and autonomy. These rents are often dissipated at the expenses of the institution's own stakeholders.

The process of internalizing rent seeking on the part of CVC had itself two aspects: on one hand it gave impulse and personality to CVC as a corporate entity, strengthening the perception of its mission among its staff and constituency. On the other hand, it promoted a parallel process of acquisition of privileges among its personnel, to secure entitlements that could be commensurate and, to an extent, validate the growing importance of the agency. An example of this process was the successful attempt of the top level engineering staff at CVC, particularly the principal engineer and the top staff of the subdirectorate of engineering, to increase their job prestige and salaries and the various perquisites that were (and are) linked to providing large contracts to the international and national consulting and construction companies that design and build large water resource projects. Perquisites include sumptuous Christmas presents, and red carpet treatment on trips to Bogota for meetings between senior CVC engineering staff and consulting construction company executives in Bogota (Olarate, 1999, Breton, 1996, Jimenez, 1999). Moreover, the position of head engineer of CVC is one of the most prestigious in the entire Cauca Valley (Olarate, 1999, Jimenez, 1999).

EIA for the Salvajina Project

International lending agencies can require recipients of their funds to adopt EIA and this was the case in the Cauca Valley. In 1974, CVC requested a loan from the Inter-American Development Bank (IDB) to finance Salvajina. Concurrently, the Colombian government issued the Code of Renewable Natural Resources and Environmental Protection (referred to herein as the Code of Natural Resources), which required EIA for all projects that could significantly affect the environment. By 1976, to meet the water quality objectives linked to the Salvajina proposal, CVC had required industries discharging wastewater to apply for discharge permits, and this created an opportunity for CVC to implement EIA. Following the suggestion of PAHO consultants and in keeping with the government's new Code of Natural Resources, CVC required applicants for wastewater-discharge permits to conduct EIAs (CVC, 1976).

As early as 1975, Robert Goodland, a Pan-American Health Organization (PAHO) consultant, visited CVC and helped "scope out the design" of an EIA for Salvajina (Goodland, 1997). Because the national government had not yet approved the project, CVC delayed taking action on Goodland's recommendations. Eventually, in 1982, CVC conducted an EIA for Salvajina, because IDB required the assessment as a condition for funding the project's construction. However, this was two years after construction had begun.

CVC as an Institutional Entrepreneur

The concept of the institutional entrepreneur is used both in sociology and institutional economics to denote the existence of an actor that triggers the change of institutional frameworks in which the same actor is embedded. While a unique definition does not exist, an institutional entrepreneur is commonly conceptualized as an actor who strategically mobilizes resources to transform existing institutions or create new ones in a way appropriate and aligned with her interests (DiMaggio, 1988; Dacin et al., 2002; Levy and Scully, 2007). Much in line with the rent seeking framework, on the other hand, the institutional entrepreneur is portrayed by economists as a self-interested subject who uses emerging institutions to gain from the establishment or the development of a business activity (Anderson and Hill, 2004; Li et al., 2006). For example, Anderson and Hill (2004) describe institutional entrepreneurs as protagonists of the development of the American West, because of their ability to profit from reorganizing and redistributing existing property rights, as well as defining property rights where they did not exist. Levy and Scully (2007) linked conflict resolution and strategic behavior of institutional entrepreneurs, emphasizing the fact that they are often able to outmaneuver dominant actors with superior resources.

The fact that CVC acted as an institutional entrepreneur is a key notion to understand both the ratio of its operations in the political arena and its successes in rent seeking. In general, CVC's organization appears to be in line with Coase's famous notion (1937), as a *nexus of contracts* in an environment which entails *search* and *contracting* costs or, as in the symmetric approach by Fuller (1969), where is costly to run and use a centralized political system. In this respect, CVC appears to have acted as an organization that tried both to internalize market transactions and decentralize the public ordering (Pagano, 2008, p. 13). Its adaptability and resistance to potentially more powerful institutional actors, such as INDERENA, on the other hand, testifies to the fact that the survival of an institution is not so much related to the degree of deviation from an abstract condition of success, such as maximizing revenues or profits, but more simply to its capacity to earn positive net benefits for itself and its stakeholders (Alchian, 1950). Because of the importance of water rights in the Cauca valley, CVC was able to re-organize the whole system of property rights at the advantage of large agro-industrial producers and, at the same time to protect them and itself from outside interference of centralized institutions.

As of 1968, CVC had become practically immune to interference from either national or local governments. However, the establishment of INDERENA as a national regulatory entity in 1968 threatened CVC's ability to make its own decisions and in effect created the conditions for what can be called a "rent seeking contest" (Hishleifer, 1989). In such a contest, two or more parties engage in competitive rent seeking, each by investing a different amount of resources, with resulting under or over-dissipation of rents. In this case, to preempt the potential competition for rents by INDERENA, CVC's Board of Directors lobbied Colombia's President to give the Corporation responsibility for managing renewable natural resources, including the

allocation of water rights (Carrizosa, 1996). Soon after Congress empowered the President to restructure government organizations in 1968, the President issued Decree-Laws 2420/68 and 3120/68 and Decree 737/71. Collectively, these made CVC responsible for administering renewable natural resources in the upper Cauca Valley.

The Corporation was eager to prevent INDERENA from issuing water rights in the Cauca Valley because it would have undermined its influence as the primary advocate for development and would have introduced uncertainties, extra costs and time delays for Valley farms and industries. These could have become themselves a vehicle for rent seeking at the expenses of the constituency of the corporation. If INDERENA had begun operating in the Valley, transaction costs associated with water allocation would also have increased because INDERENA's water allocation procedures required lengthy applications and long periods for processing by lawyers and engineers. Moreover, water allocation procedures gave government officials considerable discretion, and their exercise of discretion often led to inefficient and inequitable allocations of water rights (Mejia, Millan and Perry, 1985). Based on experience in other basins, INDERENA could spend years deciding whether to allocate or deny water rights to applicants (Olarde, 1999, Viña, 1993).

In an ambiguous stance, which is itself suggestive of the inefficiencies involved in rent seeking, CVC was simultaneously a contestant for the power to extract rents as a monopolist regulator from the Valley farmers, and an advocate to reduce the potential rent extraction that INDERESA could accomplish, if empowered with the regulation mandate. While avoiding the competition of a significant alternative actor on rent seeking, lobbying to become the regulator agency for the valley had the additional benefit of securing privileges for water users in the upper Cauca Valley, who could enjoy lower transactions costs than a typical Colombian farm or company in a different part of the country. By creating its own regulatory program, CVC succeeded in becoming the key re-organizer of property rights in the valley, shielding farm owners and industrialists from the transaction costs of negotiating water rights' allocations from INDERENA. CVC's regulatory program also successfully bid for the power to extract rents from Valley agriculture and, at the same time, reduced the uncertainties and the potential rent extraction from Valley landowners, by not allowing INDERENA's bureaucrats to exercise their discretionary power within the Cauca Valley.

As a national agency empowered by legislation and political processes, INDERENA posed a real threat to CVC since its creation in 1968, and events in 1974 only made matters worse from CVC's perspective. In that year, the Code of Natural Resources was enacted, and it made INDERENA responsible for formulating and implementing the rules that the code envisioned. The Code directed INDERENA to allocate water rights, control environmental pollution and establish an EIA program, a broad mandate, that entangled its perspective action with CVC attempts to carve its own territory in the field of property rights and mediation between national government and local elites.

Because the Code of Natural Resources was ambiguous about which environmental regulatory programs were to be designed and run by INDERENA, the President of the Republic issued Decree 133/76, which clarified INDERENA's responsibilities for formulating and implementing environmental policy (Gutierrez, 1988). The Corporation's Board feared that INDERENA's environmental policies under Decree 133/76 would constrain CVC's ability to achieve its own goals related to infrastructure projects (Gutierrez, 1988).

CVC's concerns were not limited to water allocations and infrastructure projects. If INDERENA had been able to exercise its environmental responsibilities in the Cauca Valley, CVC's power to confer and organize entitlements for agriculture, energy and natural resources would have been critically curtailed. Agricultural and industrial interests in the valley would incur the costs of applying to INDERENA for wastewater-discharge permits and approval of EIAs, some permits might be rejected, and the role of CVC as the main intermediary with the central government would be challenged. With INDERENA responsible for an EIA program in Cauca Valley, CVC's autonomy in developing electric power and reclamation projects would be reduced. The interests of CVC's constituency would also be jeopardized, as transaction costs would increase with INDERENA management of wastewater discharge permits, which might also require valley industries and farms to make major investments in wastewater treatment plants.

CVC's response to INDERENA's institutional assertiveness and implicit threats appears to line up with the so called "evasive behavior" of the institutional entrepreneur, i.e. with entrepreneurial activities that "do not alter the formal institutional set-up but rather the impact of institutions already in place" (Henrekson and Sanandaji, 2011, p. 56). In this case, IEs develop contractual arrangements to overcome or circumvent institutional barriers in ways that can be legal, illegal or associated with situations where there is not a clear dividing line between these two ways (Henrekson and Sanandaji, 2011, p. 53-54, 56). CVC's response to the threat posed by INDERENA was fully legal, but was based on the ambiguities of the law and the overlap in technical competence at the two organizations. INDERENA, which was an agency of the Ministry of Agriculture, had responsibilities to oversee pollution control, forestry and watershed management, soil conservation and erosion control, and natural resources conservation. However, CVC had been engaged in activities related to INDERENA's mandate before INDERENA's establishment, and long before the Code of Natural Resources was enacted. As of 1964, the Corporation had a Department of Agriculture with separate divisions for soils and natural resources (Posada and Posada, 1966). Employees in these divisions feared losing their jobs as a result of INDERENA's mandate.

In response to concerns of Department of Agriculture employees and to their own concerns, CVC's Board requested (in 1976) that the Colombian Council of State allow the Corporation to maintain its responsibilities and functions as the sole environmental regulatory agency in the Upper Cauca Valley (DNP, 1977).ⁱⁱⁱ CVC argued that its founding charter gave it

responsibility for natural resources conservation, land-use planning, pollution control, soil conservation, reforestation and “distribution and regulation of water for public use within the territory of its jurisdiction, for domestic, agricultural, industrial, or public supply purposes” (Decree 1707/60, Article E).

In 1977, the Council of State determined that CVC was entitled to regulate, manage and conserve natural resources. At the same time, however, the Council gave INDERENA the mandate to regulate environmental protection activities (DNP, 1977). The Council’s 1977 ruling on this matter was clearly ambiguous. CVC’s Board responded by lobbying the National Congress for passage of a law making the Corporation responsible for carrying out environmental regulatory programs. The Board was successful. Law 2 of 1978 gave CVC explicit authority over environmental regulation and water-resources development in the territory within the upper Cauca Valley (DNP, 1981).

The steps taken by CVC’s Board were a direct response to fears about the potential disruption of the status quo that would accompany implementation of INDERENA’s regulatory programs in the upper Cauca Valley. Agricultural and industrial interests in the Valley had long enjoyed rents in the form of stable, uncontested rights to water and a process for obtaining wastewater discharge permits that had low transactions costs. These interests also benefited from the subsidized outputs from CVC’s water resource development projects, such as Salvajina. In addition, INDERENA’s implementation of an EIA program in Cauca Valley would also threaten CVC’s ability to construct its infrastructure projects without external interference.

CVC’s successful efforts to gain control of EIA and other regulatory programs mandated by the Code of Natural Resources constituted an exercise of institutional entrepreneurship in the obvious sense that they helped shaping the corporation own mission in the realm of ordering and coordinating the assignment of property rights- a key element of the physiognomy of any politically enterprising institution. They were also rent-seeking actions , since the resources devoted to keeping INDERENA out of the upper Cauca Valley and the efforts made to establish CVC’s own programs for water rights allocation, water pollution control, and EIA were all aimed at maintaining the rents that had previously been accrued. As mentioned, these actions also prevented INDERENA from requiring EIAs for infrastructure projects developed by CVC. These successes, on the other hand, as the paradigm of rent seeking predicts, use institutional resources to influence politicians and outside constituencies and thus ultimately reduce the supply of public goods by dissipating some of the very rents that they are aimed to conquer.

Pollution Control and Opportunistic Behavior

A major contribution of modern organizational economics is the idea, developed by Williamson (1985) and Grossman with Hart (1986), that the expansion of an organization depends on the relative cost of carrying out transactions within or outside its boundaries. More specifically, we can re-interpret Williamson's 1967 contribution, by predicting that the expansion of an institutional entrepreneur, which generally takes place with a redistribution and/or a re-organization of property rights, can go on until a weakening in incentives – as argued by Demsetz (1967) – is generated and some of its stakeholders, for example its officers, employees, or parts of its constituency take advantage of the institutional acquired strength, by engaging in opportunistic behavior. Embracing a property rights perspective and placing a special emphasis on the problem of contracting, Grossman and Hart (1986) indicated that another limit to an increase in size emerges when an organization finds too costly to enlarge the set of property-rights that it wants to control or coordinate.

As an institutional entrepreneur, CVC proved to be a complex machinery, and, as many similar organization that had followed the original model of the Tennessee Valley Authority, its expansion took the form not only of mere growth, but of diversification and entry in different fields, including the area of a "political enterprise" (Becker, 1983, Schneider with Teske, 1992 and Wittman, 1989), and of "collective action" (Olson, 1965; Hardin, 1982). A good example of such a diversification was the development of the pollution control program where problems of allocation of scarce resources converged with collective action to reduce harmful externalities and opportunistic behavior to consolidate and empower CVC's staff. These conflicting goals reflected two tendencies, pointed out by some scholars, on one hand the attempt to improve resource allocation through the workings of "political markets" (Becker, 1983; Wittman, 1989, 1995), and, on the other hand, the inevitable inefficiency determined by the dominance within the political arena of unilateral, rather than bilateral, exchanges (Baumol, 1990; North, 1981, 1990; Holcombe, 2002).

Since its beginning, a key CVC motivation for designing and implementing environmental policies was the opportunistic behavior of the Corporation's officers and staff, who saw in the expanding influence of the institution an opportunity to secure professional prestige and economic advantages. This motivation worked also in reverse, in the sense that CVC's weaker components fought for territory and a bigger share of the corporation's mandate to maintain their insecure positions. The pollution control staff, in particular, before 1975, constituted an ad hoc group with no formal organizational identity within CVC (Arias, 1997b). This group felt that significantly extending CVC's mandate and commitment to water pollution control, and creating internal requirements for pollution control and EIA could establish its legitimacy and lead to its becoming a formal unit in CVC's organizational structure. The pollution-control staff's efforts to keep their positions and expand their operations depict yet another facet of combined institutional entrepreneurship and rent-seeking behavior: opportunistic behavior by the staff to secure and maintain their positions and expand their budgets through an expansion of the institution's mandate on regulation and control of property rights, and the expenditure of resources to procure these advantages, rather than to pursue the extended mandate itself (rent dissipation).

On the other hand, the pollution-control staff had good reason to work toward establishing a solid organizational identity and trying to assert such an identity through institutional entrepreneurship and, to some extent, the political market. During the 1960s, unemployment among professionals in Cali, the principal city in the upper Valley, oscillated between 9% and 18% and unemployment among young people was often higher (Harkess, 1972). A job at CVC was considered special because it offered prestige, fringe benefits and excellent working conditions. Moreover, employment was based on merit and not partisan politics; this worked to promote stability and continuity for CVC employees (Arias, 1997c; Posada and Posada, 1966), but it also opened a window of vulnerability due to the lack of political protection and patronage, since the Corporation's merit-based employee hiring practices contrasted sharply with the clientelism that was pervasive at other regional corporations and most government organizations in Colombia.

WPCS and its Struggle for Survival

Although the control of water pollution was part of CVC's original (1954) charter, in 1968, after more than fourteen years of developing major water resources projects, CVC still had no pollution control program. Yet this program appeared crucial to gain further territory for the Corporation, both for positive reasons, i.e. the importance of pollution control as a public good, and because of the threat that other institutions, such as, for example INDERENA, could move in to jeopardize CVC's autonomy using pollution control as an instrument. In response to these concerns, in 1968, CVC moved its Hydrology Section, then located in its Department of Agriculture, to a newly created Division of Water. That same year, when CVC saw the need to help justify the Salvajina project using water-quality benefits, the Corporation started gathering primary water quality data. But to demonstrate that benefits would derive from releases from Salvajina's reservoir to augment downstream flows, the Corporation needed a regulatory program with water-quality objectives for the Cauca River.

In 1975, after considerable internal pressure applied on management by the Corporation's water quality specialists, the Water Pollution Control Section was formed. It was created as a result of two mutually-reinforcing factors: (1) CVC's desire to justify the Salvajina Project, according with the principle of "prior investment and ex post justification", and insure CVC's autonomy in allocating water rights, and (2) the interests of Raúl Arias and others who espoused the importance of having a section devoted to Cauca River pollution control as an innovative program with great potential for political support and empowerment of the Corporation. Previously, the group of employees working on water pollution control, having no formal organizational status within CVC, constituted an ad hoc unit that CVC's Board of Directors could easily dissolve.

In the mid 1970's, as CVC was justifying the Salvajina project and struggling to maintain its independence from INDERENA, Arias, working together with PAHO consultants, prepared a report containing a proposal to CVC's director to strengthen CVC as an institution. The proposal

called for creating a formal water pollution control unit and establishing a program to assess environmental impacts. Two board members reviewed the report and recommended that the Board act on the reports' recommendations by establishing a section to control Cauca River pollution and appointing Arias as section head (CVC, 1975). CVC's Board established WCPS in May, 1975.

Once WPCS had become a part of CVC's organizational chart, Arias focused on strengthening CVC's regulatory capabilities by lobbying to increase his section's budget and staff (Arias, 1997a). Early in 1976, Arias sent letters to the biggest polluters of the Cauca River, requesting information about their wastewater discharges (Arias, 1976). He received few responses. However, the then CVC Executive Director, brought together representatives of these firms, and they agreed on a water pollution control program. According to Eder (1997), Arias had convinced him of the importance of controlling water quality in the upper Cauca River basin. Even though his position was low in the hierarchy, Arias got senior management's attention because having a water pollution program fit in with establishing Salvajina's economic feasibility and maintaining CVC's autonomy. In addition to promoting pollution control within CVC, Arias was also responsible for including an article in CVC's Agreement 14 of 1976 (commonly written as Agreement 014/76) that initiated EIA at the Corporation. The article required "environmental impact declarations and environmental impact studies" in applications for wastewater-discharge permits.

From Power Generation to Regulation

The first principle of an institutional entrepreneur is that she is an actor who triggers the change of institutional frameworks in which she herself is embedded. Accordingly, after WPCS achieved status as a formal organizational unit, CVC gradually began engaging in activities to establish a water pollution control program, an EIA program and a pollution discharge fee program. Even though water pollution control regulations (in Agreement 014/76) went into effect in 1976, WPCS's staff did not grow until 1978, when WPCS issued EIA guidelines and a regulation requiring the collection of wastewater discharge fees.^{iv} WPCS grew from six employees in 1974 to fourteen in 1978. In addition to their CVC work, Arias and other WPCS personnel helped prepare a national water pollution control regulation. Representatives from INDERENA, the Ministry of Health, the Association of Industries, and some universities met with WPCS staff several times between 1980 and 1983 to discuss a draft of the national water

pollution control regulation. Eventually, the representatives agreed to follow the provisions of CVC's Agreement 14 of 1976 in grafting the national regulation (Gomez, 1997; Saavedra, 1997).

A further opportunity for an institutional entrepreneur, however, is to further institutional change by becoming a vehicle of collective action. Even though CVC was a utility and had no specific mandate to enter the arena of collective action, water pollution control was such an opportunity. Using an institutional mechanism created by the 1974 Natural Resources Law, CVC was instrumental first in establishing Associations of Water Users in the late 1980's and early 1990's and then in preparing and helping implement sub-watershed management plans. Even though CVC lacked resources to implement these plans, it successfully promoted collective action by collecting fees linked to water concessions. The funds collected were used to protect forests and vegetation cover in the highlands in order to increase flows and stabilize discharges during the rainy season (Echevarria, 2001).

These CVC's actions followed a very general trend in the evolving role of government from central planner to decentralized regulator, responding to two related reasons. On one hand, as the "fundamental theorem of privatization" (Sappington and Stiglitz, 1987) suggests, the appropriate combination of private and public institutions may be crucial to balance situations in which firms are driven only by economic profit and have no interest in producing costly public goods. On the other hand, as proposed by the so called "neutrality theorem" (Shapiro and Willig, 1990), an enhancement in protection of collective interests can be achieved through public institutions that limit their action to the regulation of firms' behavior, without pretending to manage them directly.

It was in this context of declining capacity and willingness of centralized planning from public institutions that in 1984, the Colombian national government issued Decree 1594/84 to control wastewater discharges. This law, which was stricter than CVC's regulation mandating primary treatment by 1985, required industrial wastewater dischargers to immediately remove 80% of their BOD loads. Because of its strictness and somewhat authoritarian stance, the law presented itself as a centralized dictum with problematic features of local compliance, and thus offered a good opportunity to WPCS to strengthen CVC's institutional role as agency of control and of collective action.

This feat was first accomplished by enlarging WPCS's staff to monitor compliance with national Decree 1594/84 (Berón, 1996) and in 1985, when the Salvajina project was nearing completion, by re-assigning to WPCS some of the employees who planned the Salvajina project, rather than lay them off. When CVC's Board effected this redeployment, WPCS's staff increased to 26 (Arias, 1997c). and to 28 in 1993, after the national government issued Law 99/93.

In addition to enlarging WPCS's staff, events in the early 1980s led CVC, in 1986, to create a second environmental unit, the Group on Environmental Management (*Grupo de Gestión Ambiental*, GEM), which had a more elevated position in the Corporation's hierarchy than WPCS. Actions leading to the creation of GEM centered on INDERENA's ability to veto projects which, in the opinion of INDERENA's leadership, would cause unacceptable environmental impacts.

Between 1981 and 1985, INDERENA focused national attention on three large infrastructure because of their adverse environmental impacts: the Urrá Hydroelectric Project, the Cerrejón Coal Mine on the Guajira Peninsula, and the Metro in Medellín. Although none of these projects involved CVC, they were of concern to the Corporation because they demonstrated INDERENA's increasingly active role in regulating infrastructure projects, including the types of major hydroelectric projects that were high on the Corporation's development agenda.

The CVC leadership became particularly alarmed when, in 1984, Margarita Merino, then the director of INDERENA, vetoed the Urrá II Hydroelectric Project. She based her veto primarily on the project's effect in forcing the Embera Katio's indigenous tribes to abandon their native hunting and fishing grounds. Merino was also concerned about the project's impacts on the biodiversity of 60,000 hectares of the upper Sinú River basin's pristine tropical rain forests. The expected loss in biodiversity included extinction of sixteen animal species and destruction of several hundred thousand commercial trees. Merino's veto caused CVC and other Colombian electric utilities to increase the attention they gave to environmental protection issues (Carrizosa Umaña, 1996; Garcia, 1997).

What particularly concerned the electric utilities was the absence of an unambiguous, legal foundation for Merino's veto. The utilities feared INDERENA's leaders would exercise their own discretion in placing onerous restrictions on electric power projects. Colombian regulations are often ambiguous and leave room for interpretation by administrators, but Merino's exercise of discretion in the Urrá case was particularly troublesome because the criteria she used as the basis for her evaluation were neither explicit nor self-evident. The electric utilities reacted by calling on the national government to develop precise criteria for regulatory agencies to use when requiring and assessing environmental studies (Garcia, 1996; Szauer, 1996).

At the same time that Merino was acting on the Urrá project, CVC was embroiled in controversies linked to its Salvajina project. Communities near the project complained continuously during construction, indigenous populations and gold miners were forced to resettle, and travel times to marketplaces were lengthened because of road relocations. In addition, the Salvajina reservoir flooded 3,400 hectares, including some gold mines at the Arnazu site. CVC engineers were particularly concerned about the Salvajina reservoir's quality because of releases from two upstream waste sources: the City of Popayán was releasing untreated wastewater and solid waste into the river, and the Puracé sulfur-processing plant was discharging wastewater with high concentrations of sulfur. Moreover, anaerobic conditions in some parts of the reservoir caused obnoxious odors near the city of Suarez (Rodriguez, 1997). Furthermore, in 1985, releases of sulfuric acid into the Cauca river near Suarez caused local residents to complain, and the mass media echoed their protests (Rodriguez, 1997; Swan, 1997).

At the same time that CVC was dealing with Salvajina's environmental problems, the Corporation had several other controversial projects under development, including the opening

of a navigation channel in a Pacific Coast mangrove ecosystem, and the Calima III hydroelectric project (CVC, 1985a; CVC, 1989a, 1989b; CVC, 1990). Calima III was expected to have significant environmental impacts because it would divert 85 cubic meters/second of Cauca River water to the Pacific Coast. In addition, the project area included indigenous communities, and it was part of a tropical rain forest with one of the world's highest levels of biodiversity (CVC, 1983).

In October 1984, in an effort to deal with the environmental impacts of its proposed infrastructure projects, CVC established an ad hoc committee for environmental management. One year later, the committee issued "Environmental Management Group: Base Report," which documented INDERENA's increasing regulatory activities at the national level and urged CVC to manage the environmental impacts of its own projects (CVC, 1986b). The committee's report recommended that CVC establish an environmental management group, with members of the committee serving as the new group's staff (Mazuera, 1986b). To support its recommendation, the committee cited PAHO consultant Robert Goodland, who had recommended in 1977 that CVC establish a group to manage Salvajina's environmental impacts (CVC, 1986a). Goodland (1997) had urged CVC to create an internal environmental unit "to provide advice and early warning and to detect any downward trends," and to initiate the following actions:

- (i) assess water pollution and develop a comprehensive environmental assessment of the Cauca River;
- (ii) investigate the environmental impacts of biocides, especially those for sugar and other intensive crops, and consider the use of integrated pest management; and,
- (iii) phase out the harvesting of natural forests for cardboard and paper production and replace them with plantations as soon as possible, and implement other measures to conserve biodiversity. (Goodland, 1997: 1)

In January, 1986, CVC acted on the ad hoc committee's report by establishing the Group on Environmental Management. GEM's mandate was to "insure that projects developed or regulated by CVC would minimize or completely eliminate negative environmental effects" (Mazuera, 1986a: 1). The initial staffing of GEM included four professionals. By 1991, GEM's staff had increased to twelve.

Soon after GEM was organized, it clarified its relationship with WPCS. The latter would continue to be responsible for issuing wastewater discharge permits, but GEM insisted on a change in procedures. Before the creation of GEM, applicants for wastewater discharge permits submitted to WPCS an application package that included an EIA as one chapter. GEM required that an applicant for a discharge permit submit a separate environmental impact statement (EIS). In addition, while WPCS would be required to review EISs along with other application details, a wastewater discharge permit could not be issued until GEM had approved the EIS (CVC, 1986b; Rodriguez, 1997; Swan, 1997).

In addition to working with WPCS, the Group on Environmental Management assumed full responsibility for approval of environmental impact statements that CVC would prepare on its own infrastructure projects. GEM also set out to increase the number of CVC infrastructure projects that were subject to environmental studies.

This somewhat intricate story came to its conclusion in 1993, when the national government issued Law 99/93. This law established the Ministry of Environment and, in a move that gave CVC more than it had bargained for, fundamentally changed its role from a utility to the main local environment regulator, by assigning it functions such as water pollution control, air pollution control, solid waste and hazardous waste management, and EIA and , at the same time, by transferring electric power generation functions to EPSA.

Today, CVC is recognized as an influential and successful regulator, which has developed a constituency made not only of large landlords and influential agro-processing entrepreneurs, but also by small and medium farmers[‡]. By actively supporting water use associations, and promoting watershed management and conservation practices, CVC has also helped define a model of cooperation between upstream and downstream water use, based on voluntary fees[§], that appears particularly effective and has the potential to be replicated in several other areas with similar characteristics and problems (Echavarria, 2001).

CONCLUSIONS

The story of the Cauca Valley Corporation is paradigmatic as a development institution designed for decentralized governance , which turned into a combined venture of rent seeking and institutional entrepreneurship, two recent economic models, whose complementary characters make them highly suitable to explain organizational behavior and motivations of public institutions. As a development institution, CVC was designed to mirror the example of the Tennessee Valley Authority, a major creation of the new deal, and a model for many similar institutions in several other countries in the second half of the century. As such, it succeeded in fostering a major transformation of the local economy, with a massive shift to commercial agriculture, innovative technologies and agro-industrial development. This transformation, however, went hand in hand with its partial capture from the local elite and the consequent incentive to use CVC as an instrument to gain rents and seek political influence to foster change

[‡] Stakeholders include private landowners in the upper catchments of the sub watershed within the valley of the river Cauca. In the Bolo River Basin, for example, providers include some indigenous communities and small-scale private landholders (Kosoy et al, 2005).

[§] Members of water users associations pay an extra fee for watershed management and protection This fee is added to the water use fees and is collected by the CVC, who then transfers it back to the associations. The board of each association is responsible for managing funds and allocating payments to the upstream landowners and other management programs

in the legal and government framework as an institutional entrepreneur . As a rent seeker, CVC presents a mixed picture of collective action to gain privileges on the part of a set of local stakeholders, mainly large landlords and agro-industrialists, at the expense of the larger community, and of economic efficiency. As an institutional entrepreneur, on the other hand, the picture is more complex, as CVC appears to have been instrumental in innovating on several fronts, including the reorganization and coordination of property rights in the presence of significant externalities. While it is difficult to evaluate the balance between the essentially wasteful nature of rent seeking and the essentially beneficial nature of institutional entrepreneurship, in the end , the evidence examined does not appear to be inconsistent with the hypothesis that CVC became, however opportunistically, a vehicle of significant provision of public goods.

The history of CVC's rent seeking can be divided into two parts, according to whether the corresponding activities served its outside constituency or its internal stakeholders. The first, epitomized by the tortuous story of the Salvajina project, is a classic case of an inefficient enterprise being pushed forward, in spite of its economic and social costs , as a means to gain rents for local elites and to empower the institution in the process, by increasing its support and width of action. Even in this episode, where CVC's action mirrors more clearly the theoretical model of rent seeking, one can recognize aspects that are related to the model of the institutional entrepreneur, such as, in particular, the attempt to reshape property rights, mediate between the central and the local government, design an institutional profile of both professional and political competence.

Between 1976 and 1993, CVC designed and implemented an EIA program that served as a successful strategy for promoting water-pollution control and watershed management, but was also ultimately successful in transforming CVC from a powerful regional planning agency into a new form of regulatory institution in line with the evolution of central government toward forms of participated decentralized governance . In this, CVC perhaps obtained more than it bargained for and was taken over, to some extent, by the very programs that it had developed to increase its power as a planning agency. CVC's motivations for establishing watershed management and EIA programs were not necessarily virtuous and probably linked to rent seeking and interests of its constituency in creating a system of stable, uncontested CVC allocations of water rights and subsidies from hydroelectric and land reclamation projects. Nevertheless, rent seeking turned out to be the vehicle of institutional growth and, as an institutional entrepreneur, CVC progressed from a mere advocacy of local interests of large landowners to become an agent of collective action, and developed a successful program that pioneered environmental governance in the whole Latin- American region.

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ⁱ Kreuger estimated that rent-seeking for import licences imposed upon the economies of India and Turkey social losses that amounted in 1964 to 7.3% of the national income of India and 15% of the national income of Turkey.

ⁱⁱ The concept of rents provides a convenient framework for analyzing the behaviors of various actors related to environmental impact assessment at CVC.

ⁱⁱⁱ The Council of State, which is part of the judicial branch of government, has jurisdiction in cases involving the constitutionality of regulations which the executive branch enacts.

^{iv} Carrizosa (2002) argues that the desire for increased recognition and enhanced reputation and other, related incentives motivated the WPCS staff to promote EIA and water pollution control programs at CVC.