

Report on Shell and the Extension of the Deepwater Extraction Frontier.

Colombia

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Introduction

In the 1980s, a number of large deposits were discovered in the eastern Llanos basin. The first of these - the Caño Limón field - was discovered in 1983 by the joint venture between the State-owned petroleum company, Ecopetrol and the private corporations, Occidental Petroleum and Shell¹. In 1989 the Cusiana and Cupiagua fields were found by the joint venture between Ecopetrol and the transnational corporations, BP Exploration, Total and Triton. The discovery of these deposits marked a dramatic change in the Colombian oil context. The new high-production oil reserves enabled Colombia to become energy self-sufficient and start exporting oil again. The 1990s were the most productive years in the oil industry that Colombia had ever seen.

However, the bonanza lasted no more than a decade. In 1992, the reserves held 3.232 billion barrels (Gbbbl), which were expected to last for 20 years. Ten years later, in 2002, oil in the reserves had fallen to 1.632 Gbbbl estimated to last 7.8 years. There are other figures that explain the development of the oil sector. During this period, oil production and exportation reached its peak in 1999, with average annual production at 290 million barrels, 192 million of which were exported that year, the highest number of the decade. However, production slowed from then on and in the year 2000, State revenue began to fall with respect to its peak, which had been US\$ 1.415 billion. (Hernández, 2018: 161). The large deposits were soon exhausted given the high extraction rates imposed by the operating companies.

From 2000 onwards, the government of Andrés Pastrana (1998- 2002) began following the international trend of globalization and internationalization (Hernández, 2018: 169) and promoted oil policy reforms that favoured foreign investment. Shares in joint ventures were reduced from 50% to 30% and the royalties regime was also modified. Moreover, environmental licenses for seismic testing were no longer required for projects that did not involve building roads. In spite of all these reforms, expectations were not met and the reserves kept dwindling, and with them tax revenues.

Álvaro Uribe's new government (2002-2006) was thus faced with the challenge of finding oil and gas again, and a commitment it maintained during its second mandate between 2006 and 2010. Uribe's successor, Juan Manuel Santos, took up the same challenge throughout his two mandates, from 2010 to 2018. Two frontiers were targeted: the deepwaters of the Caribbean Sea and source rock deposits in the Middle Magdalena Valley, Catatumbo and Eastern

1 Shell participated in the venture in its early years but then sold its part of the contract to Occidental. See the chapter on Shell.

Cordillera Regions. Shell was interested in both, but focused more on the Caribbean Sea deepwaters.

Shell came to Colombia in 1936, two decades after the De Mares concession of 1905. This is when oil and gas development began in Colombia, the first project being exploration of the La Cira Infantas oilfield, executed by the Tropical Oil Company (subsidiary of Exxon). There have been many further developments since then. Shell has also been very active, not only in oil and gas, but also mining projects, many of which are no longer active or have been transferred or sold to other operators.

The purpose of this report is to analyse Shell's investments and its role in developing the Colombian hydrocarbons sector. The extractive industry saw its beginnings in Colombia 103 years ago, and Shell has been involved for almost 80 of them. It is therefore part of the country's petroleum history, and is currently playing a key role in the latest developments: offshore exploration and exploitation.

The document is divided into three sections: the first will outline developments in petroleum policies, focusing on the period between 2003 and 2015, when the laws that still regulate activity today were made; the second section covers Shell's history, projects and policies in Colombia and its current investments; and the third chapter gives an overview of the history of petroleum in the Caribbean Sea, from the first oilfield exploited by Texaco (now Chevron-Texaco) until the latest developments, namely gas reserves discovered in recent years, where Shell is currently working in Colombia.

Chapter 1 Petroleum Policy Context in Colombia

1.1 Changes to the sector: 2003-2015

According to the petroleum academic, Luis Humberto Hernández (2018: 209), there were two protagonist coalitions that dominated the petroleum political sub-system for more than a decade (2003-2015): the State or Government coalition² and the transnational coalition³.

Through Law 790 of 2002, the Colombian Congress granted extraordinary powers to President Uribe Vélez to renew “the national public administration and streamline its organisation and functioning to guarantee the country’s financial sustainability (President of the Republic, 2012, cited by Hernández, 2018: 2007). President Uribe Vélez issued decree no. 1760 of 26/06/2003 which made changes to the State oil company: Ecopetrol’s administrative power over “all resources belonging to the Nation and the administration of the strategic assets in company shares and interests” (Decree no. 1760 of 2003) was divided off and the trade union coalition was weakened through legal and de facto mechanisms. The Decree also created the aforementioned ANH, “as a special national administrative department with legal status and assets in its own right, as well as administrative and financial autonomy” (Hernández, 2018: 232). Ecopetrol thus became a public limited trading company while the ANH took on the administrative responsibilities previously dealt with by Ecopetrol.

In 2004, the joint venture agreement was terminated and a levies/royalties contract was created, more commonly referred to as a modern concession contract. It prolonged exploration and exploitation periods and guaranteed the right to extend a contract, limiting the possibility of reverting exploited fields to State ownership, as previous contracts allowed for. More independence and responsibility were also given to the contractor, including allowing for ownership of 100% of the contract rights (Hernández, 2018: 233-234).

Furthermore, in order to offer, market and award the petroleum areas through blocks, a petroleum Licensing Rounds mechanism was set up. President Uribe’s ambitious plan for developing the hydrocarbons potential was based in the precept that “economic activity should be determined by free market forces, and it is up to State to create the conditions for it to work” (Hernandez et al., 2011: 146). The government of Álvaro Uribe Vélez set in motion another series of petroleum policy reforms, as can be observed in Table 1.

2 “The main stakeholders in Government administrative coalition were from the Democratic Security Policy government - presided over by Álvaro Uribe Vélez (2002-2010) and then by his successor, President Juan Manuel Santos (2010-2018) - the Ministry of Mines and Energy, and the National Hydrocarbons Agency (ANH). (Hernández, 2018: 209)

3 The transnational corporate coalition was essentially made up of two groups of national and foreign petroleum producing companies: the Colombian Petroleum Association (ACP) and the Colombian Chamber of Oilfield Services (Campetrol). The ACP has 54 petroleum company members and Campetrol has 181 company members that provide exploration, drilling, production, transport, refining, engineering, consultation, support services or other goods and services related to the hydrocarbons sector. (Hernández, 2018: 211). Acipet, the national professional association of petroleum engineers, is also part of the corporate coalition.

Table 1 Petroleum Policies: 2003-2006

Decree no. 1760 of 2003	By which the organisational structure of Ecopetrol, the Colombian petroleum company is changed; the Agencia Nacional de Hidrocarburos (ANH) the Sociedad Promotora de Energía de Colombia SA are created; the special administrative department, known as the Agencia Nacional de Hidrocarburos (ANH) is set up, under the Ministry of Mines and Energy. It has legal status and assets in its own right, administrative and financial autonomy, and is subject to the legal regime set out in the decree herein and where not provided for in specific regulations applicable thereto; subject also to the public establishments, in accordance with the provisions in Law 480 of 1998 and the standards that replace, modify or add to it. The Sociedad Promotora de Energía de Colombia, S.A is created, a national public stock company, attached to the Ministry of Mines and Energy, with legal status and assets in its own right and administrative and financial autonomy. Its domicile and headquarters are be in the city of Bogotá, D.C., and it will be able to set up subsidiaries, branch offices and agencies in Colombia and abroad.
Decree no. 2394 of 25/08/2003	Which modifies the structure of Ecopetrol SA and determines the functions of its agencies.
Decree no. 3229 of 11/11/2003	The Ministry of Mines and Energy, considering the characteristics of the oilfield area and the volumes of production, and through the application of formula, $%D=(%Y+%P)I2$, will communicate through a resolution the percentage of shares of royalties which, as a product of the field exploitation, belong to the territorial entity. (%D: percentage of royalty shares and compensations for each territorial entity, generated by the exploitation of mineral or hydrocarbons fields; %Y: Percentage of the mineral or hydrocarbons deposit area that belongs to each territorial entity; %P: Percentage of production that belongs to each territorial entity).
Decree no. 3164 of 2003	Only the following constitutes work pertaining and essential to the oil industry: geological, geophysical, geodesic and topographical surveys for hydrocarbons field exploration and assessment; hydrocarbons well-drilling operations from the very first stages to the termination, complementation and plugging stages; operational and renovation works of hydrocarbons wells, etc.
Resolution no. 18-1709 of 23/12/2003	Nationally produced crude oil belonging to hydrocarbons operators in the exploration and exploitation contract development stage, and that will be refined for domestic supplies, will be paid for based on the international price for crude oil exports under FOB terms for Colombian ports, applying international reference pricing. For each specific load of crude oil, the price will only vary according to their assay quality measures (API gravity and sulphur percentages [%S]) and the water and sediment percentages (%) present in crude oil and salt.
Decree no. 4743: Tariff Exemptions 2005	Regulated by Decree-law 1760 of 2003 Grants exemptions on import tariffs for machinery, equipment and parts for hydrocarbons exploitation.
Law 1118 of 2006	Modifies Law 685 of 2001 of the Mining Code. Regarding concession contracts, the beneficiaries must communicate if any type of mining exploitation exists in the requested area, indicating its position and the methodology used for discovering whether the mining activity exists or not. Regarding contract extensions or renewals, the contractor must communicate

	the extension at least two (2) years before the exploitation period and the concession period is due to end. Extension can be requested for a period of up to twenty (20) years and will not be granted automatically.
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Source: Ecopetrol, cited in Hernández, 2018

With the recently created ANH, Uribe Vélez gave impulse to 2D and 3D seismic development and drilling exploration wells - mainly on national territory - aiming to increase the country's oil reserves so it could hold bids for concessions on oil blocks

Reforms and advancement of oil exploration and production continued during the two terms of President Santos, though the measures taken under the Ministry of Mines and Energy were more aggressive and concentrated on marketing areas (Portafolio, 2015). Contract terms were relaxed in order to facilitate foreign investment in such a way that operators were encouraged because there was less red tape and faster time-scales. Moreover, the framework for oil tenders and biannual licensing rounds was replaced by a flexible system by which companies can access contracts with the ANH more frequently (Roa Avendaño *et al.* 2017: 18).

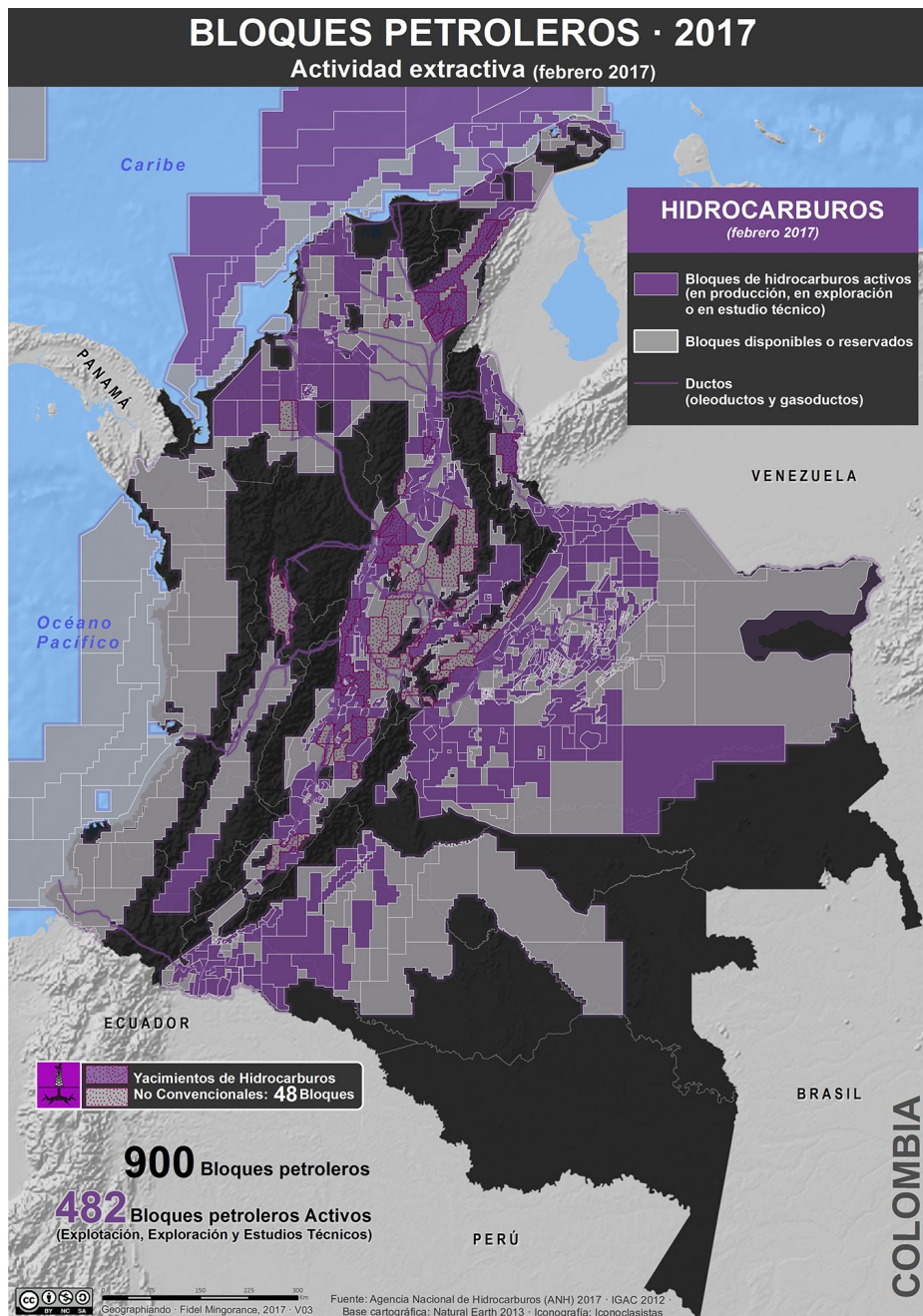
The policy reforms in the sub-sector were accompanied by others, such as labour and tax reforms as well as more relaxed environmental laws to facilitate investment.

More than a decade of aggressive advancement of foreign investment in the sector has completely changed the national context. Although its dividends did not greatly increase oil reserves for the country, the oil sector and therefore the extractive economy, became the most important objective for the national economy.

1.2 Pushing back the petroleum frontiers

Extending frontiers is one of the foundations of the capitalist economic model. According to Jason Moore, “capitalism does not only have frontiers; it is fundamentally defined by shifting frontiers”. He also warns that it is impossible to imagine production within this system without the appropriation of frontiers (Moore, 2013: 13 cited in Roa Avendaño *et al.*, 2017: 17).

Figure 1 Oil and gas blocks 2017



Source: Portal Geographiando www.geographiando.net

The endless search for hydrocarbons meant that oil and gas exploration and extraction was being carried out throughout the national territory, probing for new fields and reserves. (See figure 1). Activity stretched beyond old oil and gas basins -where secondary and tertiary recovery projects were being developed and advanced, as we will see further on - to new areas such as Amazon, Orinoco, the Pacific, Eastern Cordillera and the Caribbean Sea. In 2017, blocks in the ANH Mapa de Tierras that were assigned or tendered came to 104 million hectares, accounting for 62% of the sedimentary basins in the country. Of these, 36.76 million

hectares are under exploration (including those undergoing technical assessments) and in production (Roa Avendaño *et al.*, 2017: 19).

However, technological frontiers were also pushed back. New technologies are currently being used in old fields for primary, secondary and tertiary recovery. In fact, high investments to improve recovery of crude oil in mature (previously exploited) fields⁴, have actually enabled a huge increase in oil and gas production without increasing the number of reserves. In more than a decade of investments in exploration, there have been few discoveries of large fields. However, they have had high social and environmental costs, given that the technologies applied use more gas and energy and are accompanied by aggressive territorial occupation that has heavy repercussions: displacements, change of soil use and the depletion of natural assets.

This is what happened in Castilla and Chichimene, currently the oilfields with highest production levels. Conflict has been provoked by the aggressive secondary recovery project: local communities and oil companies dispute water resources in the areas which have been seriously affected by the extraction process. The communities denounce above all the considerably reduced water levels and high waste pollution in the river Orotoy. (Roa Avendaño *et al.*, 2017: 20)

The second technological process used to extract resources from unconventional fields is fracking, which is used to extract gas and oil from source rocks. Colombia began to take an interest in fracking at the end of the first decade of this century. In 2008, the government funded a study to identify the potential reserves⁵. A year earlier, it had issued the first National Political, Economic and Social Council (CONPES) document, which consolidated the legal, contractual and technical framework for assigning gas exploration and exploitation rights in coal seams. There followed the implementation of an accelerated regulation process for technical application. See Table 2

4 “In the early years of the 21st century, Ecopetrol invested in improving oil production in two mature fields in the department of Meta: Castilla, that produced 60,000 barrels a day in 2006; and Chichimene, that produced 5,500. In “Como el Agua y el Aceite” [like water and oil], the way production in these fields was expanded is described: the first reached 90,000 barrels per day by 2009 and the second, 30,000. With the increase of production in mature fields, Meta became the main oil producing department in Colombia, overtaking other departments in the Los Llanos region, Casanare and Arauca. In 2012, the two fields were producing 171,151 barrels per day and Ecopetrol invested over US\$ 1 billion in infrastructure. (Roa Avendaño *et al.* 19)

5 According to a 2008 study funded by the ANH and carried out by the consultancy agency Arthur Little, Colombia is among the five most promising hydrocarbons countries in Latin America. It estimates that Colombia has reserves in unconventional fields that have a potential of: “Coalbed methane: 7.5 Tcf (Trillion cubic feet) of recoverable reserves; Tar sands: 40 to 60 Gbbl (a billion barrels) of recoverable oil; Shale gas: 30 Tcf of recoverable reserves; tight gas: Unknown” (Little, 2008). The report also says that shale oil and gas hydrates potential is more limited. Areas that are rich in coal deposits are rich in gas due to the presence of methane in the coal seams (GMDC): La Guajira, Cesar, Norte de Santander, Valle del Cauca, Córdoba, Boyacá, Antioquia and Santander. The tar sands are in Caquetá and the Middle Magdalena Valley; shale gas is mainly found in the Middle Magdalena Valley, Cesar - Ranchería and Eastern Cordillera; extra heavy crude oils (tar sands and oil sands) are in the Los Llanos basin, while gas hydrates are to be found in the Caribbean Sea. Roa Avendaño, T. (2014).

Table 2 Development of the legal framework for unconventional reserves

CONPES 3517 2008	Recommended the ANH and the Ministry of Mines and Energy to strengthen the legal, contractual and technical framework for assigning coal deposit methane gas exploration and exploitation rights. It further recommended establishing regulations for contracting exploration and production areas or making the appropriate adjustments to the contract regulations in force.
Resolution 180742 of 2012	Established exploration and exploitation procedure for unconventional fields, including fracking. Clarified that activity regulated by the resolution would be subject to standards relative to the environment and protecting natural resources, etc. (This includes being subject to the environmental licence process).
Decree no. 3004 of 2013	Increased the content of the previous resolution. Set out the definition of an unconventional field and ordered the development of technical standards and procedures for fracking and unconventional fields.
Resolution 90341 of 2014	Established the technical requirements and procedures for exploring and exploiting unconventional fields in Colombia, including decreeing that: “to drill several wells, the company is required to make one single application with a general plan, prohibiting stimulation at a distance of less than 1km from a fault.” On the other hand, injection activities during overall tests in areas where there are faults were banned when the pressure of the annulus in injection wells is over 20%, or where there is seismic activity of a magnitude of 4 or over.
Resolution 0421 of 2014	Repealed resolution 1544 of 2010 and adopted the terms of reference for developing the environmental impact studies needed to obtain an environmental license for exploratory hydrocarbons drilling projects.

Source: Última Frontera, Alianza Latinoamericana frente al Fracking. s.f.

The ANH expects to increase the country’s oil reserves by between 11% and 26% with unconventional crude oil, especially shale oil. As for gas, it estimates an increase of between 33% and 66%, expanding its existing hydrocarbons reserves to fully supply the domestic market for some seven years. In 2015, seven unconventional hydrocarbons contracts had been signed. These projects are currently at the exploration stage (Bernal Rubio *et al.*, sf: 65). The *Mapa de Tierra 2017* (land map) shows us that there are 46 unconventional field blocks were under offer (Mapa de tierras ANH, 2017).

Chapter 2: Shell in Colombia

2.1 The arrival of Shell in Colombia

Shell came to Colombia to exploit the first area to attract the attention of transnational companies at the time: the Middle Magdalena Valley⁶. Since 1917, the Tropical Oil Company (now Exxon Mobil) had been operating the so-called De Mares Concession on the eastern bank of the Magdalena river. Shell was initially attracted by the government of President López Pumarejo's invitation as well as by a promising analysis of the Colombian geological structures by the Swiss geologist, Daniel Trumphy. Negotiations then took place where the main demand was for relaxing oil exploitation conditions, which resulted in the Government passing Law 160/1936 (setting out the conditions for subsoil private property in some areas, the reduction of royalties, an increase in the exploration period, and the exemption of royalties for refined crude oils in the country) (Vega, Nuñez and Pereira, 2009).

Shell set up there in 1936 in order to explore and exploit hydrocarbons, mostly in Colombia. During the same year, the Canadian Eagle Company also came to Colombia, setting up the "Compañía Colombiana de Petróleo El Cóndor". It was granted concession to operate Yondó (146,000 hectares in the department of Antioquia, in the municipality of Remedios (now, Tondó) (Vásquez 1994), in the floodplains on the west bank of the Magdalena river. This company operated independently for two years but then merged with Shell in 1938. In August 1941, under its new name, "Shell Cóndor", the company discovered oil in the Casabe-1 well and began developing the Casabe-1 field, which is west of the Barrancabermeja port (Santander)⁷. It continued expanding its activity to three other fields, all in the Middle Magdalena Valley⁸.

Due to the fall in production and low oil prices in 1965⁹, Shell put forward negotiations for reverting the Casabe field to the Colombian State, which was supposed to take place in 1975. Shell pressurised the Government to suspend additional exploration and drilling works in 1968. Its plan was to pay off its workers and sell the Ecopetrol field. However, the Ministry for Employment authorized a minimum of operations to continue in the wells that were still productive, keeping at least 70 workers. In 1974, Ecopetrol and Shell ended up negotiating the

6 The region of Middle Magdalena Valley stretches from the Honda rapids (Tolima), in the Inter-Andean Valley of the river Magdalena to the municipality of La Gloria (Cesar), where the river meets the coastal plains of the Caribbean Sea, between Eastern and Central Cordillera.

7 In 1954, the Casabe field reached maximum production levels after more than 400 wells were drilled, with 46,000 barrels of petrol per day (BOPD) (Shell, 1996).

8 The Cantagallo concession (21,000 hectares in the department of Bolívar in the north of Barrancabermeja), was granted in 1937, initially to the Socony Vacuum Oil Company. In 1943, oil was discovered in the El Campo and more wells continued to be developed up until 1949. In 1951, the concession was acquired by Shell Condor (Vásquez, 1994). Cantagallo was declared commercial in 1952 and a year later, in 1953, Shell Condor was also awarded a concession for San Pablo. It discovered the Yarigui field there and proceeded to drill some 40 wells (Monroy y Pérez, 2017). The El Difícil concession (48, 568 hectares) in Plato (Magdalena) was granted to Shell Condor in 1946, with commercial production beginning in 1948. The concession for Cristalina in Sabana de Torres (Santander) was granted in 1950. By the end of 1949, 1845 wells had been drilled, of which 177 belonged to Shell (145 in Casabe, 14 in Cantagallo and 18 in El Difícil) (Vásquez, 1994). During the 1960s, Shell was also involved in exploration in the Gulf of Urabá, where it drilled wells in Urabá 1 and Turbo 1 (Antioquia). (Vásquez, 1994).

9 By 1965, the 448 wells were only producing 10,000 BOPD and the price of crude oil was US\$ 2 per barrel.

early escheat of Casabe, on the condition that it came as a package that included its other fields, Cantagallo (Bolívar), Yariguí (Santander), San Pablo (Bolívar), Las Garzas (Santander), El Dificil (Magdalena) and Cristalina (Santander)¹⁰.

However, as well as taking over Shell's crude oil production, Ecopetrol took over a toxic mix: according to Avellaneda, 20% of the Casabe liquid production was salt water. Once this was separated from the oil, it would be directly discharged into the marshlands, something the company did for years (Avellaneda, 1998). Between 1985 and 1986, the environmental crisis hit home in the midst of Ecopetrol's efforts to increase production from the field: crude oil deposits were found to be polluting water and land in the lowland wetlands. Local communities asked for the central government to intervene and an extensive meeting was called in 1986, but Ecopetrol did not attend¹¹. The case against Shell lasted some time. Finally, an environmental recovery program was carried out, which cost around US\$ 2 billion of public funds and did not manage to save all the ecosystems. This was all done to try and fix the damage caused by Shell over decades (Avellaneda, 1998)

2.2 Shell after the 1980s

Law 20 of 1968 and Decree no. 2310 of 1974 made changes to the conditions for hydrocarbons exploration and exploitation in Colombia. They brought in joint venture agreements, which drew Shell's the interest. The company therefore created a new business name, the Compañía Shell Exploradora y Productora de Colombia, and in 1984 entered into a joint venture agreement with Exploration to explore the La Rompida area (Santander). After drilling several wells and finding nothing of commercial interest, the new business name was liquidated in 1987.

In June 1985, Shell changed its standpoint and became a shareholder in the second largest oilfield in Colombia (the first being La Cira Infantas), the Caño Limón field in Aruaca, in the north-east of the country on the border of Venezuela. Shell became the sole shareholder of Colombia Cities Services, paying US\$ 1 billion (New York Times, 1985). Colombia Cities Services changed its name to Compañía Shell de Colombia INC and entered into the Cravo Norte joint venture agreement with shares as follows: Oxy (25%), Shell (25%) and Ecopetrol (50%) (Vásquez, 1994). The operation also included 37.5% of the Samoré block in the department of Boyacá, in the north-east of the country (El Tiempo, 1998). There was much controversy around this acquisition:

“Oxy should have paid the Colombian State US\$ 800 million to transfer its shares to Colombia Cities Services in taxes on other or miscellaneous income (impuesto a la ganancia ocasional). The 1987 report of the Contraloría General de la Nación (Comptroller General of the Nation), which was summarised in the Colombian weekly magazine, *Semana* (3 august 1987, *La revolución minera* [the mining revolution]), relates several occasions on which Shell took advantage of the State of Colombia.

10 The contract was signed on 15 July 1974 for a sum of US\$ 3.4 billion, ensuring that Ecopetrol dominated 44% of national production for that period (Shell, 1996).

11 The main damages reported by the local community include: (i) crude oil pollution in surface water; (ii) health problems caused by drinking polluted water; (iii) polluted water burning pasture land and crops; (iv) landslides caused by vibration drilling; (v) marshland pollution in El Tigre; and (vi) the concession of groundwater to Ecopetrol for injection that allegedly left the municipality without drinking water for its inhabitants.

These include the case of the acquisition of Colcitco (Colombia Cities Service) for which they paid a mere 400 pesos at the time - which was worth one dollar - as a stamp duty (Fayad, 2014).

During the same decade, Shell participated in other contracts in different regions throughout Colombia such as Arauca, Santander, Huila, Casanare, Caquetá and Putumayo¹². By becoming sole shareholder of the Colombian Houston Oil Co. in Tenneco in 1988 (Hocol 2018), the Shell group now owned three companies in the country. The first was Shell Colombia SA (SCSA), which was divided into two branches: Autofull, an automobile services network; and PIASA, an agrochemicals research and development company. The other two were the Compañía Shell de Colombia Inc. and Hocol. In 1998, Shell sold its shares in the Cravo Norte joint venture and the Samoré block. Both were sold to Occidental. Shell maintains that they did this because of the complicated security situation in the country (First Magazine, 2016). At this time Shell was estimated to be producing 20% (80,000 BOPD) of Colombian production. Seven years later, in November 1995, it decided that Hocol did not “have the required global portfolio characteristics” and sold all its shares to the Saudi Nimir Petroleum Company (First Magazine, 2016).

In July 2007, Shell returned to hydrocarbons exploitation when it partnered with Ecopetrol to look for oil in the Caño Sur in the Llanos Orientales, a 654,000-hectare area (First Magazine, 2016)¹³. From 2011 onwards, it acquired several contracts in the Middle Magdalena Valley (VMM3¹⁴, VMM-27¹⁵ y VMM-28¹⁶) and the CPE-4 in Los Llanos.

However, Shell began transferring or selling these blocks in August 2013 when it announced it had transferred 30% of its participation in the VMM-27 block to Conocophillips¹⁷. Years later,

12 Shell entered into the Rondón (Arauca) joint venture agreement and also bought a small part of the Las Monas (Santander) field, that were sold in 1991 (Vásquez, 1994). It also was participated in some unsuccessful ventures in the Putumayo basin and the Amazon region in the south of Colombia, bordering Ecuador (Shell, 1996). It was the sole operator of the Tello, Carnicerías and Neiva fields in El Huil, which it reverted in 1994. However, it was also operating a number of other projects: Palermo (the San Francisco and Balcón fields), Río Baché, Pataló, Hato Viejo, Campos Dina, Palogrande, La Jagua (Huila), San Luis, Chaparral and Río Saldaña (Tolima). It was a partner in the following projects: Casanare, Orocué, Corocora, Río Pauto and Cusiana (in Casanare, operated by ELF Aquitaine), Río Meta (in Casanare, operated by Braspetro) and the Samoré block (between Boyacá and Casanare, operated by OXY) (Shell, 1996). In 1993, Hocol was a partner in the following contracts: Orteguzza (in Putumayo, a standard joint venture agreement) and Andaquíes (in Caquetá, a joint venture agreement with risk allocation), both operated by Repsol.

13 Exploratory drilling revealed that there were heavy hydrocarbons. In February 2011, Shell decided to withdraw from the block and sell its participation to Ecopetrol, that continued as the sole operator (Petróleo y gas, 2014).

14 The VMM-3 block, between the municipalities of San Martín (Cesar), Puerto Wilches and Rionegro (Santander), was transferred to Shell in a contract signed with the ANH in 2009 (Servicio Geológico Colombiano, 2019).

15 On 7 March 2011, Shell and the ANH signed an exploration and production contract for the VMM-27 block, between the municipalities of Simití and Puerto Wilches, also in the Middle Magdalena Valley. On 20 March 2013, the ANLA granted an environmental license for exploratory drilling in the block.

16 The VMM-28 block between Puerto Wilches (Santander) and San Martín (Cesar), was transferred to Petróleos del Norte SA in March 2011 but 85% of its shares - to the worth of US\$ 27 billion - are reported to have been sold to Shell in the same year (Energy-Pedia, 2011). According to the same source, in December 2015, it was still mostly owned by Shell, under the same conditions as the VMM-27 block (Investorvillage, 2015).

17 On 19 December 2015, Shell was still reported as having majority ownership of the block (Investorvillage, 2015). The US Shell website also reveals that since July 2014, it has the highest participation in VMM-3, VMM-27, VMM-28 (Middle Magdalena Valley) and CPE-4 (Llanos) (Shell USA, 2014).

in 2016, it transferred the entire VMM-3 block to Conocophillips. Canacol Energy afterwards acquired 20% of the block shares. In the VMM-3 block, that was under the San Martín municipal jurisdiction, the vertical Picoplata-1 well was drilled, and tests for a conventional well were carried out. However, an environmental license for exploration and exploitation as an unconventional well was later requested. The operation drew public attention because it was the first place in Colombia where fracking would have been used to exploit hydrocarbons. It is worth noting on the Canacol website that Shell is still a partner in this block, with 20% of shares (Canacol, 2018).

In an interview in 2016, Rodriguez Tamayo, CEO for Shell Colombia, told First Magazine that the company had withdrawn from all the onshore blocks to focus entirely on offshore activity (First Magazine, 2016). This reveals a tendency in how Shell operates: withdrawing from assets that are potentially controversial and that could be detrimental to its image, and keeping assets that are not at the centre of attention. Shell stopped fracking in order to keep working offshore, a sub-sector currently not under public scrutiny.

2.3 The by-products business

In 1937, Shell founded the Sociedad Comercial Holanda Colombia that operated in Barranquilla as an agent of the Shell group. It imported oils and greases from Curacao to supply service stations in the main cities along the Atlantic coast. In 1941, this company was dissolved and replaced by “Compañía de Petróleo Shell de Colombia”, a sales department that expanded with branches in Medellín (1949), Cali (1949), Ibagué (1954) and Bogotá (1959). The shops sold products such as industrial and agricultural machinery lubricants and chemical products for industrial purposes, insecticides, fungicides, weed killer and so on. When the De Mares concession was reverted and Ecopetrol was set up, it extended its business to the direct supply of petrol.

In 1945, the Compañía de Petróleo Shell de Colombia was dissolved and a new subsidiary set up: Shell Colombia SA (SCSA). SCSA built the Puente Aranda (Bógota), storage facilities where fuel was pumped from Barrancabermeja to be sold in the three service stations in Bogotá, directly operated by the company. This model was later to include concessions on privately owned service stations. Service stations continued to be set up in Cartagena, Barranquilla y Medellín. By the end of 1954, there were already 65 and by the early 1960s, 150. At the start of the 1970s, the direct supply of petrol was transferred to four different companies, making the conditions less attractive. Shell therefore decided to sell its shares to Mobil, only retaining the right to sell lubricating oils in these stations.

The Puente Aranda plant, that had opened on 1954 as a petrol distribution point, began to be reformed in 1970 to produce lubricants for internal combustion engines, gearboxes, the metallurgical industry, hydraulic machinery and the textile industry. Furthermore, in 1972, SSCA set up in the free-trade zone of Barranquilla to enjoy tariff advantages, which enabled it to gather imported raw materials and thus ensure the supply chain for manufacturing its products. In 1973, the same company acquired the refining plant that Petrosander, the Santander petrochemical company, had built in 1968 to produce industrial oils¹⁸. This plant

18 Tersol is a brand of oil for glazing rice and for pharmaceutical laboratories, as well as lubricating oil for special turbines and machines.

kept functioning until 1992, when it was closed due to the open economy policies that enabled foreign products to be imported. (Shell, 1996).

The second modernisation took place in 1985, when three plants for manufacturing and packaging products - including the renowned “Rimula” - were set up. In 1991, Shell acquired a plant in the municipality of Mosquera (Cundinamarca), where it produced specialised lubricants and asphalts. It later set up an asphalt modifying plant in the same place (El Tiempo, 1999). Shell renewed its interest in service stations in 1999, building another network up until 2006, when it withdrew from the supply business once again, selling 38 service stations in Bogotá, a supply base in Puente Aranda and a commodities terminal in Santa Maria to Petrobas (Dinero, 2005). In 2017, Shell withdrew from the Colombian market of direct lubricant sales, through a contract between Shell Markets (Middle East) and the Colombian supply network, Altipal. Shell thus no longer had a direct role in the Colombian lubricant wholesale market. The national press maintains this was in order to “focus its activity in Colombia on exploring gas and oil fields” (El Tiempo, 2017).

After less than half a century in Colombia, Shell, “had reached the homes of every citizen. It moved into their lounges, got into their clothes closets and sat down at their tables” (Shell, 1996) By the 1960s it was part of the entire hydrocarbons and their by-products chain, as a passage from their website explains:

“... You could find Handy Oil anywhere. This was an oil for lubricating sowing machines, household appliances, hunting and fishing equipment and even toys. There was also oil for cigarette lighters, and Shell Donax B for lubricating breaks - all our products -. not to mention foam for furniture, baby bottles, musical instruments, acoustic insulation all varnishes, each and every one made from Shell chemical products” (Shell, 1996).

Shell and the agrochemicals business

Shell contributed to the expansion of the country’s main mono-crops. Between the 1950 and 1960, its products were used intensively in the banana-growing areas in Magdalena and Urabá, the sugar plantations in Valle del Cauca and the rice fields of Huila and Tolima. In 1954, the Cesar cotton fields were attacked by a pest, the “pink worm” and the Shell product, Endrex was used to control it, which was widely advertised.

In 1978, all the agrochemical production activity was moved to the free-trade zone in Barranquilla, where there were already lubrication production plants. Agrochemical production was not only used to meet domestic demand but was also sold to countries such as Ecuador, Panama and Peru. The agrochemicals division was strengthened in 1988 with the acquisition of the experimental centre, PIASA in Palmira, aimed at improving assessment and the formulation of new tropical farming products. In 1993, the entire Shell agrochemicals division was transferred to the Cynamid group, including all the Colombian business (Shell, 1996).

2.4 Shell and Cerro Matoso

Between 1975 and 1994, Shell participated in mining Cerro Matoso, which was extremely important economically for the country. This is an iron and nickel mine in the department of Córdoba, north Colombia which was discovered in 1956 by Richmond Petroleum (a subsidiary

of the Standard Oil Company). Up until 1970, there was a type of concession contract between the State, who through the Institute of industrial development (IFI) created a company called Econíquel, and Hanna Mining (a subsidiary from the agreement with Standard Oil) that created Conicol. In 1975, Shell partnered with its subsidiary, Billinton Overseas, and in 1979 it legally established Cerro Matoso SA with Billington, Econíquel and Conicol as the main shareholders. In 1980, Shell bought Hanna Mining's shares and so then owned 52.3% of the shares, while Econíquel had 47.7%. All sorts of problems ensued: international market prices fell; there were technical failures and environmental problems; and the press was reporting corruption. By the beginning of the 1990s, Cerro Matoso SA was producing 12% of global ferronickel supplies. In 1994, Shell global negotiated with the South African company, Gencor, and sold it most of its mining business, including its shares in Cerro Matoso (Shell, 1996).

2.5 Shell's influence on Colombian politics

Extractive industry giants have traditionally had a direct influence on national politics. The title of the classic text by Jorge Villegas refers to Colombian oil as “profits for gringos”. His writings analyse the role of transnational companies since the first oil concessions, a topic which was subsequently taken up and further developed by other authors. The pressure they put on governments, parties and specific people has enabled conditions to be created that protect their interests to the detriment of the common good.

As mentioned above, Shell was first invited to Colombia by the President, López Pumarejo (1934-1938). Shell demanded that oil exploitation conditions be relaxed, and this was achieved through Law 160 of 1936. This law enabled certain sub-soils to be privately owned: those that had stopped being national heritage before 1873 and had not been recovered by the nation. It also reduced royalty payments and increased the exploration period from six to nine years. Furthermore, companies were exempt from royalty payments on refined crude oils in Colombia. (Vega, Nuñez y Pereira, 2009).

Numerous press statements clearly demonstrate how petroleum policies in Colombia were formed. In 1995, the CEO for Shell Colombia, Douglas W. Ellenor gave his opinion on an amendment to the tax reform law that was generating mistrust among businessmen; he maintained that the country's oil joint venture agreement was less competitive than in Argentina, Chile and Peru (El Tiempo, 1995a). In November 1996, Joaquín Moreno Uribe was the first Colombian to become CEO of Shell in Colombia. In statements made to the daily newspaper, El Tiempo in 1997, Moreno complained about the conditions at the time: “Operating costs are very high due to the crisis in the country, tax rates and the security measures we are obliged to take. It is clear that there is no incentive for exploration under the current terms” (El Tiempo, 1997). Joaquín Moreno Uribe is now on Ecopetrol's Board of Directors, which is currently accused by the Crown prosecution of the biggest corruption case the country has ever seen: the enlargement and modernisation of the Cartagena refinery, known as the Reficar case (Razón Pública, 2018).

In May 2012, preparations were made for Shell to enter as a key agent in extending the extraction frontiers in the Caribbean deepwaters. When the Colombian Government spoke of the need to increase the country's reserves, The CEO of Shell in Colombia, Eduardo Rodríguez Tamayo, told the daily newspaper, El Espectador, that there were, “bottlenecks that prevent

this from happening, above all because of how long it takes to obtain a license and the difficulties with local communities”. In the same interview, he highlighted the need to speed up the environmental licenses process (El Espectador, 2012). Rodríguez is on the Board of Directors for the ACP, the Colombian Petroleum Association. On 15 October 2015, he made a public appearance as the Chair of the ACP Board of Directors when he gave the opening address at the organization’s conference. Close ties between the Government and Shell were made clear when the Shell CEO made a speech at the ceremony, alongside the then vice-President, Germán Vargas Lleras and the Minister of Mines and Energy, Tomás González Estrada (Censat, 2018).

When world oil prices fell in 2015, Shell and other oil and gas companies made a number of demands on the Government, which are registered in the National press. They asked for the current contracts to be modified and also the contracts for the next calls for tender. They specifically wanted point “X” of the ANH participation to be changed. This refers to the quantity of crude oil that the contractors were to give if the prices are high. At the time, “X” was from US\$ 48 per barrel. They also asked for new tax deductions on the CREE (Impuesto sobre la renta para la equidad – an equity corporate tax) as well as speeding up devolution of the DIAN, (the National tax and duties department), in order to improve companies’ cash flow (Dinero, 2015). As previously noted, the creation of the free-trade zones regime was key to advancing the position of transnational companies in the Colombian Caribbean. It was done through Decree no. 2682 of 23/12/2014, that awarded priority incentives especially for this regime.

The Shell CEO, Eduardo Rodríguez, said that free-trade zones were a necessary step towards viable projects, referring to it as a “framework that gives more benefits to the companies... The market is extremely competitive and only the countries with the right terms will attract capital and more importantly, to offshore blocks, which constitute a new frontier. (El Tiempo, 2016). In September 2016, Rodríguez also said, “The industry and Shell hope that conditions do not deteriorate with the new tax bill that is to be presented at Colombia’s Congress.” he was clearly pressurising the legislative powers, highlighting the need for “incentives to invest” in order to obtain better tax benefits. It would appear that the creation of offshore free-trade zones is not enough for the transnational corporation: in another statement, Rodríguez said, “we need to be continually assessing the situation to compensate for the risks involved in operating in Colombia”. (La Economía, 2016). In addition to establishing offshore free-trade zones, the Government amended the royalties regime for companies investing in the sea. According to the ANH, “Whoever produces hydrocarbons at a water depth of 1000 metres or more will only pay 60% of the tariffs normally paid (in royalties)”. There are also reductions to income tax, the CREE tax and the contributions companies must pay once they have reached the market price points and accumulated reserves (Crudo Transparente, 2016).

There are two cases in particular where Shell officials directly influenced Colombian politics. The first concerns Mónica de Greiff Lindo, the daughter of the former Attorney General, Gustavo de Greiff. De Greiff Lindo was initially Deputy Minister for Mines and Energy and the Minister for Justice in Barco's government (1986-1990). Between 1991 and 1993, she was vice-CEO of Shell in Colombia (El Espectador, 2013). In 2013, she withdrew from the company in order to work as Ernesto Samper’s treasurer during his presidential campaign. She

was also the contact person between the Santo Domingo group and Samper's government at that time (Dinero, 1995).

The second case involves Ana María Duque Vallejo, legal representative and current CEO for Shell in Colombia, Ecuador, Central America and Spanish-speaking Caribbean, according to the public document, "Certificate of Incorporation and Legal Representation" in the Bogotá Chamber of Commerce, by Shell Exploration and Production Colombia GmbH (Sepc). Duque Vallejo, who was appointed in 2017, held two positions during Uribe Velez' government. Initially, between June 2004 and June 2006, she was in the Office of the Presidential Adviser on Equality for Women. Later, between June 2006 and May 2009, she was an advisor for the ethnicities administration in the Ministry for Home Affairs (Canning House, 2018).

The national development plan presented by Ivan Duque's government (2018-2022) seems to have been strongly influenced by the pressure of oil companies in Colombia: there is a direct reference to both unconventional fields (fracking for shale gas and coalbed gas) and offshore projects (ultra-deepwaters), with the usual goal of increasing reserves to maintain self-sufficiency:

"The Government faces the challenge of increasing reserves in order to preserve hydrocarbons self-sufficiency in the medium- and long-term. Therefore, as well as increasing recovery factors in production fields, there are two great opportunities: (1) offshore projects and (2) unconventional reserves (YNC). Regarding the former, the Government intends to develop a regulatory framework for the development and production stage. As for the latter, national dialogue needs to move forward with the help of high-level experts, and pilot surveys and exploration need to be put in place so as to identify the main risks involved in developing these resources and determining whether current regulations and institutions can guarantee environmentally responsible exploitation that respects communities". (Presidency, 2019)

Chapter 3: Petroleum Development in the Colombian Caribbean Sea.

3.1 The beginnings: Chuchupa, with Texas Petroleum

Offshore exploitation in the Colombian Caribbean coast began in 1972 when the Texas Petroleum Company (now Chevron Texaco) discovered the Chuchupa field. Chuchupa is located 26 kilometres from the coasts of Riohacha (Guajira) and is currently operated by Chevron in conjunction with Ecopetrol (BNAmericas, 2019)¹⁹. The discovery of the Chuchupa field, and subsequently the fields in Tierra de Ballenas and Riohacha boosted natural gas consumption in Colombia, which was later limited with the electric rationing at the beginning of the 1990s (Semana, 2014).

In 1995, the comptroller general of Colombia, David Turbay Turbay, opened a tax investigation to identify those responsible for the damages caused to the Nation when promoting the interests of the Chevron Texaco. In fact, the contract for operations in the two gas production fields in Guajira, which were supposed to have been returned to the Nation in December 2004, had been extended in advance for twelve extra years. This was done through an addition to the contract that conceded Chuchupa, Ballena and Riohacha to Texaco, deposits that were supposed to have remained under the exclusive ownership and management of the Nation when the contract terminated. It is surprising that this decision was taken nine years prior to the escheat set out in the contract. According to Turbay,

“The company obtained such advantages by using institutional blackmail: it threatened to suspend all planned investments to the country if the Government could not guarantee a long-term investment, such as had been previously proposed with the open contract extension, with a second arrangement for service provision and the final BOMT (building, operations, maintenance and transfer) option for the management of Chuchupa B and its oil-rich annexes" (El Tiempo, 1995b).

In 2003, during the presidency of Alvaro Uribe Vélez (2002-2010), Chevron-Texaco and Ecopetrol signed the extension of the joint venture agreement until 2019, which had been meant to terminate in December 2004. ANH and Ecopetrol justified their decision by saying that, “Its net value was worth more to the Nation than what it would have obtained with the termination” (El Tiempo, 2003). A number of Congress members opposed this operation because they maintained that the Nation would lose US\$ 87 million by extending the contract.

Exploring and Exploiting deposits in the Caribbean Sea deepwaters: the great challenge.

After discovering and developing Chuchupa, there was a long period with little exploratory activity, and no discoveries in the Colombian Caribbean. Up until the ANH was excised from Ecopetrol in 2003, there was a big push to encourage more transnational corporations to get involved in offshore exploitation, with the usual objective of increasing oil and gas reserves in the country. It was then that deepwater exploration - as well as searching for oil and gas in source rocks - became one of the biggest challenges for the oil and gas sector. The ANH

¹⁹ Drilling on the Chuchupa well began on 19 October 1973 and reached a vertical depth of 5610 ft. 1977 is recorded as the first production year of the field, and in 1996 the second platform, Chuchupa B, was installed. (El Tiempo, 2001). There are currently 27 wells registered on the field, drilled between 1973 and 2006 (Servicio Geológico Colombiano, 2019).

estimates a potential of 12 billion offshore barrels, which is why they have implemented reforms in recent years to facilitate foreign direct investment (FDI) in deepwater projects, significantly expanding the oil frontier in the Caribbean Sea.

In keeping with the international trend of promoting deepwater exploration, both the Uribe Velez and Santos governments prioritised this in their oil policy and made necessary reforms to advance this purpose. On 23 December 2014, through Decree 2682, the government established "conditions and requirements for the declaration of the existence of permanent offshore free-trade zones". The Ministry of Industry and Commerce (2014) supported the decree with the following arguments:

“The National Government is committed to developing the exploration, exploitation, processing and commercialisation of hydrocarbons. Studies estimate a potential in the offshore sedimentary basins that, if proven, could multiply current reserves in Colombia.

Significant long-term investments are needed for offshore hydrocarbon projects, in addition to a competitive international fiscal and regulatory framework.

Special conditions to attract investment to the hydrocarbon sector need to be established so as to obtain economic benefits for the country, such as attracting new capital investments, developing competitive processes, promoting economies of scale and simplifying the procedures for the trade of goods and/or services.

The hydrocarbons sector is the largest generator of foreign exchange in the country today and it is a priority for Colombia to guarantee its energy security and promote the discovery of new oil reserves". (Ministry of Industry and Commerce, 2014)

The decree that covers the activities of technical evaluation, exploration and production of offshore hydrocarbons and its related activities was the result of pressure from oil companies. This pressure went on for several years, and the falling oil prices only strengthened their case. The decree became an incentive for investment by transnational companies seeking to develop or continue activities for exploration at sea. Offshore contract areas thus enjoy the benefits of the current free-trade zones located on the mainland, as well as additional favours granted in the tax reform passed in 2016, which began to be applied in 2017. It is worth highlighting the following benefits for companies:

- An income tax single rate of 15%.
- Income tax exemption on the transfer of dividends to partners by the established company, since the company already assumes the payment of income tax on the profits obtained.
- Exemption from Value Added Tax - VAT, with the right to a bimonthly refund on the sale of raw materials, parts, inputs and finished goods from the national customs territory to industrial users of goods or services in the free-trade zone.
- They shall not be subject to paying the CREE tax surcharge (Acosta and Franco-Zárate, 2015).

In addition, exports from the free-trade zone will benefit trade preferences, such as those of the Free Trade Agreements in force for Colombia (Ministry of Commerce, Industry and Tourism, 2014). Two other measures favoured offshore investments:

the Government amended the high prices clause; and the terms of the pre-2014 offshore contracts were equalised with the 2014 Round contracts. This means that contracts negotiated before 2014 can equalise the terms of the contract, thus receiving the benefits stipulated after that date, something that is contrary to Colombian law, which does not apply terms retroactively. All these measures benefit companies such as Ecopetrol, Anadarko, Petrobras, Repsol, Exxon and Statoil, which currently have blocks for exploration mainly in the maritime areas of the Caribbean. (Roa Avendaño *et al.*, 2017: 2001)

3.3 Pushing back the maritime frontiers

The results began to show: in November 2016, Orlando Velandia Sepulveda, former president of the ANH, highlighted the huge investments in exploration in the Colombian Caribbean Sea. “We have covered kilometres of ground, beating a record in seismic data acquisition and there are large companies operating in the area. More than 30 thousand kilometres of seismic data acquisition (El Universal, 2016). On 2 November, 2018, Luis Miguel Morelli, the current Chair of the ANH, continued in the same vein with announcements made at the Universidad del Norte in Barranquilla, during the conference, *Energy challenges in Colombia and the Caribbean* and then at the El Prado Hotel (also in Barranquilla) during the National Forum on Offshore Operations. On both occasions, he expressed his interest in promoting offshore projects and source rock deposits as mechanisms for overcoming the scarcity of reserves. Seismic exploration has become increasingly widespread in the country. To extend the marine frontier,

The ANH invests heavily in geological studies, intense seismic data acquisition campaigns and well drilling, with the purpose of “heating” in order to show how promising the oil blocks are and attract companies more easily. (Roa Avendaño, 2017: 20)

According to the Crudo Transparente site, in 2016, and without having new contracts signed at that date, 22 blocks were awarded for offshore activities in the Colombian Caribbean. They are being carried out by Anadarko, Shell, Chevron, Repsol, Petrobras, ONGC Videsh LTD and the State company Ecopetrol (Crudo Transparente, 2016)²⁰. The Colombian Geological Service geovisor registered 82 drilled wells in the Colombian Caribbean (27 of them in the Chuchupa production field), distributed by basins as follows: 47 wells in the GUA OFF basin, 30 in SIN OFF, 2 in URABA OFF, 2 in LOS CAYOS and 1 in COL OFF (Colombian Geological Service, 2019). Table 3 shows the respective contracts, operating companies, status of the contracts and concession areas. The Shell blocks are in yellow.

Table 3 Offshore contracts in Colombia

20 In 2004, the ANH awarded its first contract, the *offshore* Tayrona block to a consortium between Ecopetrol, Statoil, Repsol and Petrobras. In 2006, it assigned Fuerte Norte and Fuerte Sur to the Ecopetrol-Anadarko consortium (according to the ANH, the most promising two wells are there). In 2007, 6 more blocks were assigned (RC5, RC7, RC9, RC10, RC11, RC12) to ONGC, Repsol and Ecopetrol (ANH, 2016).

CONTRACT	OPERATOR	STATE	Area (Ha)
COL 1	ANADARKO COLOMBIA COMPANY	TECHNICAL ASSESSMENT WITH ANH	1,430,120.24
TAYRONA	PETROBRAS INTERNATIONAL BRASPETRO B.V.	EXPLORATION WITH ANH	1,300,434.21
GUA OFF 1	REPSOL EXPLORACION COLOMBIA S.A.	TECHNICAL ASSESSMENT WITH ANH	1,228,357.83
COL 2	ANADARKO COLOMBIA COMPANY	TECHNICAL ASSESSMENT WITH ANH	1,206,618.09
COL 4	REPSOL EXPLORACION COLOMBIA S.A.	TECHNICAL ASSESSMENT WITH ANH	1,079,330.81
COL 6	ANADARKO COLOMBIA COMPANY	TECHNICAL ASSESSMENT WITH ANH	1,034,790.76
COL 7	ANADARKO COLOMBIA COMPANY	TECHNICAL ASSESSMENT WITH ANH	985,324.27
COL 3	SHELL EXPLORATION AND PRODUCTION COLOMBIA GMBH (SEPC)	TECHNICAL ASSESSMENT WITH ANH	950,631.02
GUA OFF 3	SHELL EXPLORATION AND PRODUCTION COLOMBIA GMBH (SEPC)	TECHNICAL ASSESSMENT WITH ANH	949,350.56
COL 5	ANADARKO COLOMBIA COMPANY	TECHNICAL ASSESSMENT WITH ANH	741,473.45
FUERTE NORTE	ANADARKO COLOMBIA COMPANY	EXPLORATION WITH ANH	264,308.36
FUERTE SUR	ANADARKO COLOMBIA COMPANY	EXPLORATION WITH ANH	258,768.48
PURPLE ANGEL	ANADARKO COLOMBIA COMPANY	EXPLORATION WITH ANH	223,761.83
RC-11	REPSOL EXPLORACION COLOMBIA S.A.	EXPLORATION WITH ANH	186,895.99
SIN OFF 7	SHELL EXPLORATION AND PRODUCTION COLOMBIA GMBH (SEPC)	EXPLORATION WITH ANH	176,748.36
RC-12	REPSOL EXPLORACION COLOMBIA S.A.	EXPLORATION WITH ANH	135,235.52
RC-5	ECOPETROL S.A.	EXPLORATION WITH ANH	134,540.68
RC-10	ONGC VIDESH LTD COLOMBIAN BRANCH	EXPLORATION WITH ANH	133,827.11
RC-7	ECOPETROL S.A.	EXPLORATION WITH ANH	117,599.01
GUA OFF 2	ONGC VIDESH LTD COLOMBIAN BRANCH	EXPLORATION WITH ANH	117,134.96
RC-9	ECOPETROL COSTA AFUERA COLOMBIA S.A.S	EXPLORATION WITH ANH	103,662.98
GUAJIRA	CHEVRON TEXACO PETROLEUM COMPANY	PRODUCTION PARTNERSHIP WITH ECP	81,971.01

Source: Crudo Transparente (2016).

Since the ANH was set up, Bolivia entered a new era, expanding its extraction frontier to the Colombian Caribbean. During this period, there have been several discoveries of hydrocarbons that further increase the interest of large transnationals in the area:

Table 4 Offshore wells drilled in the Colombian Caribbean Sea between 2012 and 2017

Well name	Block	Year of drilling	Location	Water depth	Total depth (TVD)	Participation	Result	Sources
Mapale-1	RC-5	2012	12 km from the Bolívar coastline	45 m	3704 m	Equion (now owned by Ecopetrol), 40.56%, Ecopetrol	Dry natural gas.	(El Heraldo, 2012)

Orca-1	Tayrona	2014	40 km from the Guajira coastline	674 m	4240 m	Petrobras 40%, Ecopetrol 30% y Repsol 30%	Gas. Proven reserves of 264 million barrels of oil equivalent. Largest discovery of hydrocarbons in Latin America in 2014.	(El Heraldo, 2016), (Ecopetrol, 2014)
Calasú-1	Fuerte Norte	2015	Close to Purple Angel-1		6876 m	Anadarko 100%?	Without information to date	(Servicio Geológico Colombiano, 2019)
Kronos-1	Fuerte Sur	2015	53 km from the Córdoba coastline	1584 m	3720 m	Ecopetrol 50%, Anadarko 50%	Gas. A verified gas province First well in ultra-deepwaters	(Ecopetrol, 2015)
Purple Angel-1	Purple Angel	2017	4.7 km from Kronos-1	1835 m	4795 m	Ecopetrol 50%, Anadarko 50%	Gas. A verified gas province	(Ecopetrol, 2017a)
Gorgon-1	Purple Angel	2017	27 km from Purple Angel-1	2316 m	4575 m	Ecopetrol 50%, Anadarko 50%	Gas. A verified gas province In the deepest waters in the history of offshore drilling in Colombia	(Ecopetrol, 2017b)
Molusco-1	RC-9	2017	Guajira, 10 km from Chuchupa	62 m	1892 m	Ecopetrol 100%?	First offshore well operated by Ecopetrol. Without information to date	(Trading Petroleum, 2017)
Brahma-1	Tayrona	2017	Near Orca-1		3804 m	40.56% Do Equion, 32%, Ecopetrol, Petrobras 27.44% (?)	Without information to date	(Servicio Geológico Colombiano, 2019)
Siluro-1	RC-11	2017	Off the coast of Guajira		1995 m	Ecopetrol 50%, Repsol 50%?	It is reported as dry	(El espectador, 2017)

Source: prepared by the authors

The Chair of Ecopetrol gave a statement saying that no new wells were drilled offshore in 2018, but in 2019 drilling began again (El Heraldo, 2018).

3.4 Shell's new interests in Colombia: the Caribbean Sea

Similar to any other natural good, deposits that are relatively easy to exploit are those that are extracted first, and therefore the first to disappear. So now the more easily extracted hydrocarbons are becoming depleted. The incessant need for energy means that as time goes

on, finding and exploiting new deposits is less efficient, both in terms of energy and economic resources. This is the same logic with which Shell operates at a global level: it produces extreme energies that require an even more intensive use of energy and materials in order to be extracted, as well as involving enormous environmental risks and much shorter production times (Gómez, 2018). This could be another way of explaining Shell's activity in Colombia: initially it moved into unconventional deposits (oil and shale gas) in Block VMM-3 and heavy crude oil in Caño Sur; and then it turned its interest to unconventional extraction in offshore ultra-deepwaters. As cited above, the Shell CEO affirms that their interests are now exclusively in offshore unconventional extraction, which is corroborated by the information they have on the website about their presence in Colombia: "We are involved in the exploration and production business through our three offshore blocks. Our focus is on exploring new liquid and natural gas reserves in the Colombian Caribbean Sea. We are currently carrying out exploration activities such as 2D and 3D seismic campaigns" (Shell, 2019).

According to information from Shell, the offshore Colombian Caribbean potential reserves are estimated at 9 billion barrels (while the country's current proven reserves are around 1.7 billion barrels) (Shell, 2017). This information is clearly in line with the official discourse on the need to increase oil reserves to avoid losing the country's self-sufficiency, and backs up what is stated in the National Development Plan for 2018 - 2022. As mentioned above, the Colombian Government is placing its hopes on taxes from offshore exploitation, based on the progress made in exploration in recent years, both in seismic acquisition and in exploratory drilling. The country has invested in seismic data acquisition in both of the ocean basins, but has put much more into the Caribbean coast, where it is preparing the zones for the arrival of larger companies; the ANH maintains that all the interested companies are among the top 50 in the world (ANH, 2016). Currently Shell has three areas assigned: GUA OFF-03²¹ (off the coast of the department of Guajira), COL-03²² (off the coast of the department of Magdalena) and SIN OFF-07²³ (off the coast of the department of Bolivar). The first is an "ANH Technical Evaluation" type area and the last two became E&P (exploration and production) areas in March 2019 (Colombian Geological Service, 2019; El Heraldo, 2019).

21 This block was allocated in the 2010 Round, and covers 949,350 hectares (Portfolio, 2014). The contract was signed on 17 March 2011, and comprises a minimum exploratory program: core piston testing, 2D seismic data acquisition, regional mapping and remote sensing studies and bathymetry.

22 Block COL-03 was awarded in the 2012 Colombia Round and covers 950,631 hectares. The contract was signed on November 27, 2012, with a minimum exploratory program that includes: 2D seismic data acquisition and high-resolution bathymetry.

23 Block OFF-07 was awarded in the 2014 Colombia Round and covers 176,748 hectares. The contract was signed on 4 September 2014 and commits Shell to a minimum exploration program involving 3D seismic reprocessing of at least 50% of the total area, core piston tests and wells at an estimated depth of 8,000 m from the surface and 7,000 m from the seabed.

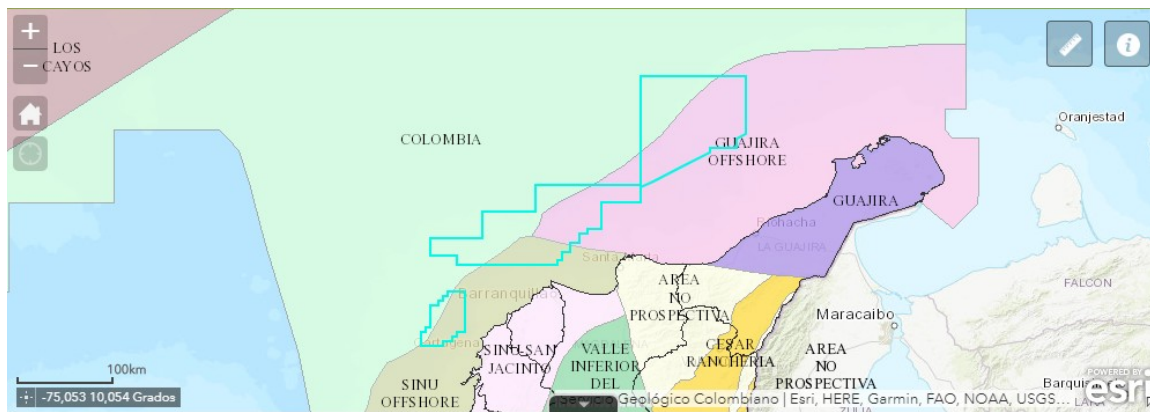


Figure 1 Shell blocks in Colombia (Colombian Geological Survey, 2019).

In February 2014, the British company, BG Group acquired 30% of Shell's participation in the GUA OFF-03 block (Portfolio, 2014). In this respect, the president of the company Eduardo Rodríguez Tamayo said: “With their financial support and experience in offshore extraction we hope to continue deciphering the potential of the Caribbean” (Colombia Energía, 2014). In 2016, in a multi-million-dollar transaction, Shell acquired the entire BG Group. This financial agreement strengthened Shell's position in the Brazilian deepwater "Pre-sal" project (El Espectador, 2016), and in the Colombian Caribbean Sea.

On 22 June 2017, Shell applied to the National Authority of Environmental Licences (ANLA) for the environmental license to advance the project referred to as the Calypso North, though its official name means “The SIN OFF 7 Block drilling exploration area” The project is located in the Caribbean Sea off the coast of the Department of Bolivar, 18 km at its closest point to the coast line. The environmental license was granted on 4 December 2017 by resolution 01564. Neither Shell nor ANLA acknowledge that this has any type of impact on communities in the area. In this regard, the license says:

“(…) the Company, based on the criteria presented (anthropogenic activities) and considering that the execution of the project will be at least 18 km offshore, finds that the project will not affect territorial units or social and/or community infrastructure, which is why it does not establish a Territorial Area of Influence for the socio-economic component.”

However, they do consider it worth identifying the small-scale fishing stake-holder groups. According to the filter carried out by Shell, 42 fishermen's associations with a total of 1351 members are identified as stakeholders in the towns of Arroyo de Piedra, Barú, Bocachica, Cartagena, La Boquilla, Loma Arena, Manzanillo del Mar, Pasacaballos, Pueblo Nuevo, Punta Arena, Punta Canoa, Santa Ana, Tierrabomba, and Juan de Acosta. Information on the project will be shared with these associations between November 2016 and February 2017.

The terms for the environmental license analysis have also been modified to allow for additional economic incentives for the aforementioned companies: the "1% Investment Plan" (established in Law 99 of 1993, Decree 1076 of 2015, and modified by Decrees 2099, 75 and 1120 of 2017), which establishes that any project that uses water resources taken directly from natural sources and requires an environmental license, must invest at least 1% of the value of

the project for the recovery, conservation, preservation and monitoring of the watershed that feeds the respective water source, does not apply in this case:

“(…) are not applicable to the project in question, since as stated at the time by the then Ministry of the Environment, Housing and Territorial Development (now MADS) connected to the ANLA by means of communication 2000-E2-76293 of 26 July 2007 (cited by the Company in Chapter 11 of the EIA as "official letter No. 2000-E-76293 dated 25 July 2007"), The 1% investment does not apply to offshore projects, since the sea does not belong to any river basin, nor does it discharge its waters into a natural hydrographic network. On the contrary, it serves as a receiver of the waters coming from rivers and continental channels.”

Although Shell maintains that there are no marine protected areas (MPAs) identified in the project's area of influence, the following protected areas are said to be close to the block:

- Corales de Profundidad Natural National Park
- Marine Protected Area El Rosario and the San Bernardo Archipelagos
- El Corchal "El Mono Hernández" Flora and Fauna Sanctuary
- The Salamanca Vía Parque Isla
- Coastal Environmental Unit (UAC) Magdalena River

Finally, in March 2019, the GUA OFF-03 and COL-03 blocks were changed from the "ANH Technical Evaluation" projects to Exploration and Production (E&P) contracts in which they agree to invest US\$ 650 million (El Heraldo, 2019). A few weeks later, Shell and Noble Energy signed additional provisions allowing for the transfer of interests, rights and obligations in the "COL-3" and "GUA OFF-3" E&P contracts; Shell sold 40% of its participation and its operator status to Noble Energy (La República, 2019).

3.4 A brief history of resistance

Fortunately, there has been some resistance in our Colombian Caribbean coast, which will serve as an example for the struggles to come over our maritime heritage. The Raizal community of San Andrés, Providencia and Santa Catalina, together with the Corporation for the Sustainable Development of the Archipelago of San Andrés, Providencia and Santa Catalina (CORALINA) filed a popular complaint against the ANH in 2011, in view of the awarding of the Cayo-1 (E&P Contract) and Cayo-5 (TEA Contract) blocks in the ANH's 2010 Round. The communities consider the proposed hydrocarbon exploitation a risk to their ways of life and to the marine diversity. Both the social mobilisation and the legal case resulted in the ANH suspending the contracts. President Juan Manuel Santos also felt pressurised to prohibit hydrocarbons, exploration and exploitation in the archipelago. In June 2012, the San Andrés Administrative Court ruled in favour of the popular complaint and ordered the ANH to suspend the processes initiated for the exploration and exploitation of hydrocarbons. In December 2016 the Council of State ratified the Administrative Court's ruling that definitively prohibited these activities in San Andres, Providencia and Santa Catalina (Roa Avendaño, 2017).

Final reflections

- Shell, like other transnationals, is moving towards the new Colombian oil frontier: the deposits in the ultra-deepwaters of the Colombian Caribbean Sea. These deposits are gigantic carbon bombs that further increase the threat to the earth's climate stability, put at risk the biodiverse marine ecosystems, threaten the traditional ways of life of small-scale fishermen, and are in no way in line with the need to take action to confront the climate and environmental crisis on the planet.
- The "gas province" was named thus because of the recently discovered gas sand stored below the southern Colombian Caribbean seabed (Kronos-1, Purple Angel-1 and Gorgon-1). However, extracting these hydrocarbons, which are under between 1500m and 2300m of water sheet and are extreme energies, is a serious challenge for Shell and the other oil companies with blocks in deepwaters. In the words of Michael Klare, "technical possibilities are being tested in geologically and geographically prohibitive environments". To extract these hydrocarbons, drilling must take place at extreme temperatures, under extreme pressures and at extreme depths. These conditions mean that operations will be more prone to accidents of all kinds and with much more serious consequences, as was the case in 2010 in the Gulf of Mexico BP gigantic disaster (Klare, 2012). All this calls into question the discourse of the extractive industry that insists that they use "the most advanced technologies and best practices", denoting an apparent infallibility.
- Like other transnational companies operating in the country, Shell has used its power and influence to obtain privileges and improvements to contracts. The case of Rodríguez Tamayo, president of Shell in Colombia and president of the ACP, is especially telling: he repeatedly pressured the central government over the "the delay in issuing licenses" and "the difficulties with the communities" with the clear intention of dismantling the environmental institutions and any type of opposition to his investments. Public statements made by the Shell CEO in the national press show the pressure the company puts on the legislative powers in order to obtain greater tax benefits, based on what they call "incentives to invest", a claim that Rodríguez Tamayo reiterates with respect to the creation of the offshore free-trade zones and the demand for better economic conditions for his company. The company's lobbying power has played a preponderant role in relaxing the regulatory framework for hydrocarbons exploitation. It is clear that the transnational companies in the extractive industry shape the laws as they see fit in order to order to create the most comfortable conditions possible.
- The new activities of Shell in Colombia demonstrate once again the extreme trends in its global investments and its disregard for the planetary climate crisis. Meanwhile, its CEO Ben van Beurden communicated at the end of 2018 that,

“we are taking important steps to realise our ambition to reduce our net carbon footprint by establishing short-term strategies. This ambition positions our company well for the future and seeks to ensure our prosperity in a world that is striving to achieve the objectives of the Paris Agreement” (Shell, 2018).

Extending the extraction frontier to the depths of the sea to extract extreme hydrocarbons does not reduce the carbon footprint and much less ensures planetary prosperity; it is rather proof of the real position of the transnational company in relation to the Paris Agreement and other international commitments, and only increases concern about the advance of the oil frontiers.

- 45% of Colombian territory is in the Pacific and Atlantic oceans, which extend through 12 departments and more than 40 coastal municipalities; and the marine diversity of the Colombian seas is considered the largest in the world (Ministry of the Environment, 2015). In spite of this, there are no social or civil organizations currently working to address the various issues that threaten this marine and coastal diversity. This situation requires strengthening documentation and dissemination of the implications that the expansion of this new extractive frontier will have. It is also important to work with local organisations to defend the Colombian seas

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