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# Oil offsets in Esmeraldas (Ecuador) When the promotion of development shores up unequal risk situations

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## ABSTRACT

The radical school identifies development as a core strategy for enduring disaster risk reduction. Simultaneously, development policies pursued by neoextractivism States often result in social and territorial dynamics that recompose risk situations without necessarily reducing them. They sometimes even intensify them. The city of Esmeraldas perfectly illustrates the detrimental effects when it comes to the risks of a voluntarist State policy based on oil revenue. Esmeraldas hosts infrastructures that are strategic for the country, for oil processing and export from the Oriente oil fields. The periods of government under Correa's presidency (2007–2017) saw a momentum of compensatory investments (linked to the exploitation of primary resources) and pro-development (with respect to marginal territories catching up), which particularly concerned Esmeraldas. Analysis shows that the considerable sums invested in the city for these reasons resulted in the urban territory evolving without a shared vision. Ultimately, risk situations were recomposed (in certain cases intensified); the colossal economic resources that were mobilised did not give rise to progress commensurate with investments (the development objective remained intact); ways of managing territories and also development and compensatory funds remained structurally asymmetrical, cultivating subordination that constituted one of the long-term props shoring up risks in Esmeraldas.

## 1. Introduction

For several decades, the radical approach to risks identified development (including sustainable improvement of living conditions) as a basic strategy for disaster risk reduction (Desai and Maskrey, 2015). In practice, differentiated development results in an equally-differentiated share of the risks, management efforts and the benefits drawn therefrom (Smith, 2008). The very narrative of development, behind a progressive appearance of emancipation, carries with it numerous detrimental effects. Very often, it fosters the reproduction of social order rather than its fundamental transformation towards fewer vulnerabilities or more justice (Rist, 2013).

The city of Esmeraldas, in Ecuador, was primarily concerned by the State's development policies based on the redistribution of oil revenue between the end of the 2000s and the mid-2010s (Cypher and Alfaro, 2016). Analysis of the consequences of these risk policies reflects a two-fold context. On the one hand, it considers the antecedence of long-term reflection on the risks and their management in Ecuador (D'Ercole and Metzger, 2004; Rebotier, 2016) and, on the other hand, the April 2016

coastal earthquake (Goretti et al., 2017; Waldmueller et al., 2019). After this major earthquake, attention shifted to Esmeraldas, a little-studied city on the north Pacific coast.

Even though damage proved to be relatively slight, the stakes were quite significant for Esmeraldas (key infrastructures for processing and exporting the country's oil), very high degree of exposure and vulnerability (Rebotier et al., 2019a; Image 1). Esmeraldas is a stigmatised Afro-Ecuadorian city (Valdivia, 2018) forged by different economic exporting cycles (tobacco, cocoa, bananas) and successive accumulation regimes (Rebotier et al., 2019b; Image 2). Today, oil exports prevail. This paper advances that pro-development approaches of the neo-extractivist model (Svampa, 2019) embodied by the Correa years (2007–2017) ultimately resulted in the intensification of (re)territorialised risks (Rebotier, 2012): territorial dynamics went hand in hand with the recomposition of unequal risk situations that remain problematic.

Yet, in Ecuador, progressive Correa's governments have massively improved different sectors and services (health, basic and higher education, transport infrastructures) along with reducing inequalities (Gini

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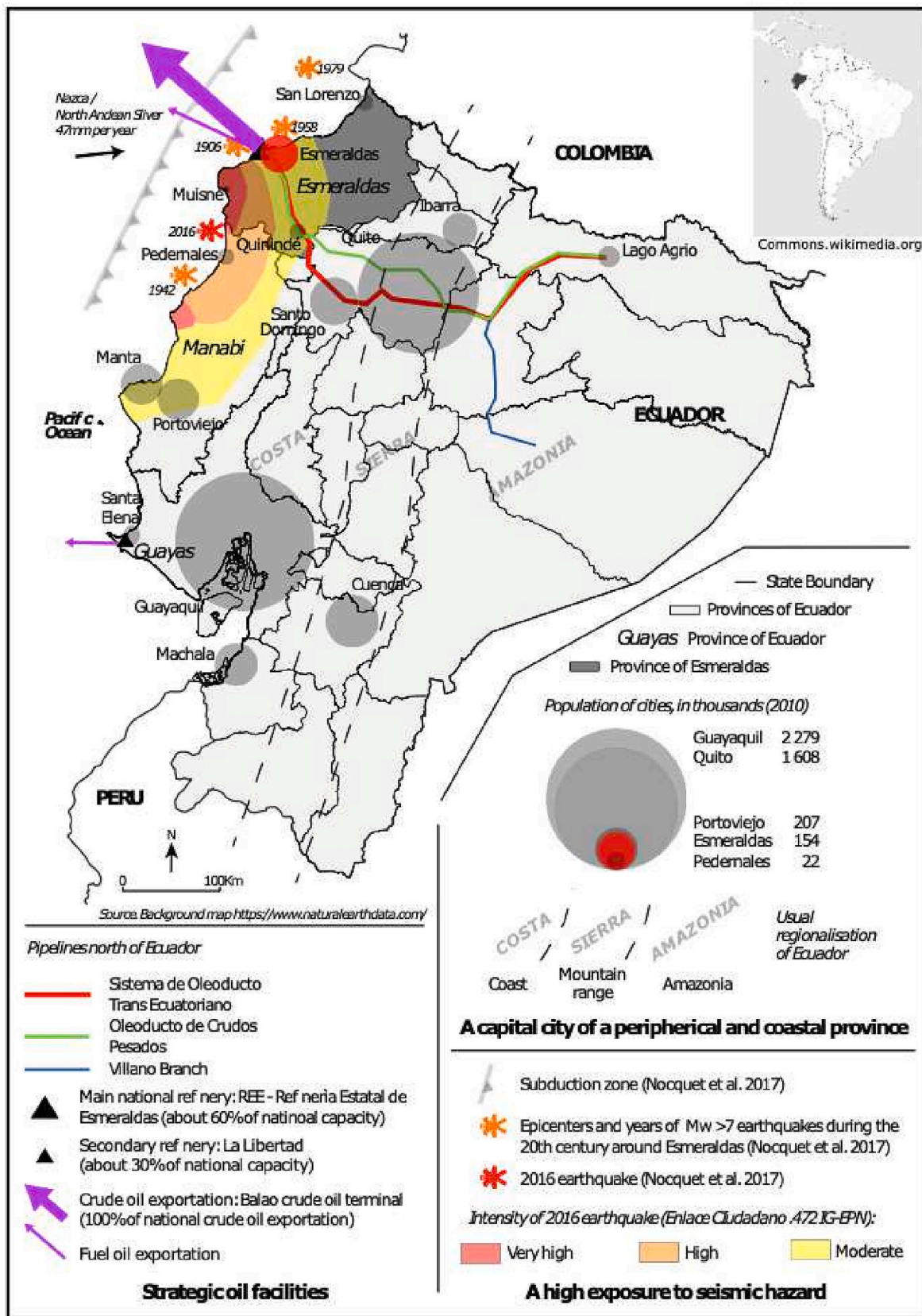
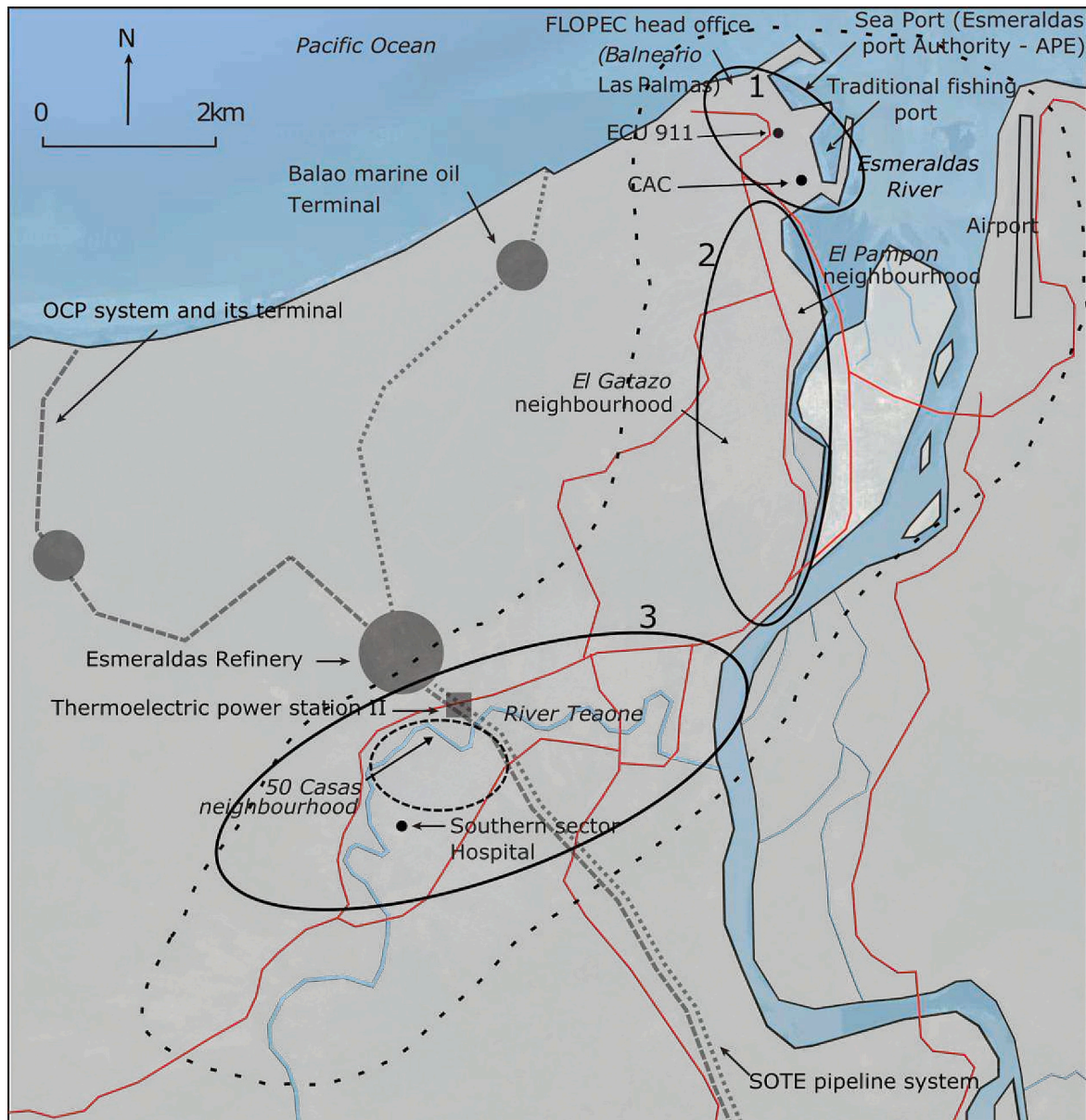


Image 1. The city of Esmeraldas, a strategic outlet for Ecuadorian oil, highly vulnerable to major earthquakes and ensuing tsunamis. Source: from Rebotier et al., 2019a.

Index dropped from 0.534 in 2007 to 0.447 in 2017). As most of the other pink-tide governments in the region, stuck in a structural situation of dependency (Andrade, 2016), the initiative of those in Ecuador resulted in making a few pay the price of development for the many. This article examines the evolution of risk situations for the few.

Drawing on all the data gathered with regard to Esmeraldas, the purpose of this study is to more broadly explore the detrimental effects on risk situations of development by the principle of compensation, particularly in a context of neoextractivism. The first section sets out a

panorama of dilemmas and paradoxes that compensations entail with regard to environmental degradation, risks and risk management. It more specifically introduces the case of Ecuador and particularly the city of Esmeraldas. The following section presents data and documents used for analysis of the Afro-Ecuadorian city. The next section reports on factual results that connect development levers, risks and the territory. Several lessons are discussed in the final section.



Source. Background map: <https://www.google.com/maps/>




-  Urban sectors marked by certain activities
- 1 North, the tourism city
- 2 Centre, the river city
- 3 South, the oil city
-  Barrios Aledaños in immediate vicinity of energy facilities
-  The city of Esmeraldas as a whole without any precise location

Image 2. Map of the oil and energy infrastructures, important sites in Esmeraldas, and the city's morpho-economic zones. Source: from Rebotier et al., 2019b.

## 2. Theoretical and problematic background

### 2.1. The controversial principle of compensations

Generally speaking, compensation is a response expressed as an outcome of identified damage. It consists in indemnifying the injured parties by assessing the damage suffered and establishing the terms and conditions for compensation (Arnauld de Sartre and Doussan, 2018: 130). The logic of compensation is, for example, mobilised in forest conservation measures (Ribot and Larson, 2012) and management of greenhouse gas emissions (Gillenwater et al., 2007). It works on the commodification of standardised assets, the exchanges of which constitute a method of compensation. This is then close to the way in which insurance and some public policies operate when it comes to risks. Economic compensations allocated following disasters are not only intended as a response to damage suffered but also as a guide, through their framing effect, for the future behavior of actors in accordance with the objectives of compensation operators (Paleari, 2019; Hudson et al., 2019; Nhu Nguyen, 2020; Qin et al., 2020). They have a performative dimension (as in the neoliberal environmentalism of REDD+ mechanisms: Sheng, 2019).

Yet numerous questions remain: technical, with regard to damage assessment and the method of compensation envisaged (Oreska et al., 2020; Gastineau et al., 2021), also moral, even legal, with regard to value estimation (Douai and Plumecocq, 2017; Calliari et al., 2020) of generalised commensurability (debates that can be found on the payment of ecosystem services – Kull et al., 2015), as well as the perverse and convoluted effects of the measure (Günther et al., 2020; Nuesiri, 2018; Poudyal et al., 2016; Anderson, 2012). The logic of compensation, in accordance with a form of ecological modernisation, does not so much address the causes of the damage (to reduce them or fight against them) as it does their consequences on the environment, the populations and even institutions. In doing so, it responds to the problems without dealing with the causes and even competes with socially-embedded norms that prove to be useful for environmental preservation (Benjaminson and Kaarbus, 2018). Finally, it allows what poses a problem to keep functioning in spite of everything, as Fletcher states with regard to the persistence of neoliberal conservation in spite of its glaring ineffectiveness (2023). Although compensation may create the illusion of eliminating damage, it does not. It makes it (sometimes contractually) acceptable while framing risk situations and human settlements.

This is explicitly denounced in numerous environmental conflicts when certain actors oppose the logic of compensation by arguing that it is the principle itself of environmental degradation that is unacceptable (and not only the impacts). They operate therein an alternative prioritisation of values (Casey et al., 2008). Compensation made with regard to petroleum activities often goes beyond environmental damage alone and promotes a form of social restitution. Yet, as the literature shows, compensation has implications for the social world or space, but does not deal with the causes of the damage. Damage caused by oil exploitation on the environment and populations, and even on institutions and democracy (Pérez Schael, 1997; Ross, 2001; Watts, 2004) continues to exist. The logic of compensation is even sometimes a cause of additional damage (Ribot, 2018). Correa's Ecuador illustrates, at several levels, the detrimental effects on the risks of compensatory logic associated with oil revenue (Andrade Echeverría, 2008; Fontaine, 2009; Acosta, 2010).

### 2.2. Ecuador and neoextractivism: the emergence of a compensatory State

The place of oil-related compensations in Ecuador is contingent on changes in the sector and the State's position with regard to development. As such, the last half-century was characterized by four key moments.

1. The military government, in power at the beginning of the 1970s, embraced a form of developmental nationalism based on heightened

control of resources by the State. The public enterprise CEPE (*Corporación Estatal Petrolera Ecuatoriana*) was created in 1972, Ecuador joined OPEC in 1973, and oil was the cornerstone of the nation's 1973–1977 development plan (JNPCE, 1972, chapter IV).

2. The 1970s energy crisis disrupted the sector. The return to democracy went hand in hand with the debt crisis and the “lost decade” in Latin America (ECLAC, 1996). The 1982 Hydrocarbons Act saw a return to the private sector, reducing State margins. Petrol prices collapsed in 1986, the main Trans-Ecuadorian pipeline for the exportation of heavy crude oil (SOTE – *Sistema de Oleoducto Trans-Ecuatoriano*) catastrophically ruptured following the 1987 earthquake (leading to a 6% slump in GDP that year). The CEPE became PetroEcuador in 1989, at the time of internationalisation of oil companies in the region (Boue, 2002). Ecuador left OPEC in 1992, triggering a decade of neoliberalisation of public affairs and structural adjustment projects (Ocampo and Martin, 2003; Ruckert et al., 2017).
3. Up to that point, legislation did not enable detrimental effects of oil drilling to be regulated in the territories or in affected communities (Morales Villagomez, 2012:74). But the combination of demands from both environmental activists and indigenous groups during the 1990 decade (Fontaine, 2003) influenced the 1998 Constitution, which introduced the fundamental principles for the protection of culture, human rights and the environment. The consequences of oil extraction activities were given a legal framework by the Environmental Regulation for Hydrocarbon Operations – RAOHE (*Reglamento Ambiental de Operaciones Hidrocarburíferas en el Ecuador*), adopted in 2001, that especially established a principle of “compensation between the operator and social actors in the area of influence” (Juteau, 2019: 46–47). Despite further legislation and the detrimental effects of oil extraction being put on the political agenda, these principles remained mostly ineffective.
4. The arrival of Rafael Correa to power (2007–2017) was marked by a form of neonationalism (Fontaine, 2010). He steered the State's return to the oil sector (the country rejoined OPEC in 2007) and strengthened institutions and public authorities (Ramírez Gallegos, 2010). He also espoused a broad principle of compensation intended, on the one hand, to remedy socio-environmental liabilities relating to the exploitation of natural resources (PRAS, 2018) and, on the other hand, to promote development of the nation and especially its margins (both territorial and social) due to “historic social debt”. Oil drilling was a key lever in an interventionist public policy, shaping the characteristics of neoextractivism riddled with contradictions (Lander, 2014; Svampa, 2019): the extractive economy rationale was less in the hands of private capital and multinationals than in the hands of sovereign States, which increased redistribution on the grounds of development (Andrade, 2016). But the detrimental effects of extraction, the flip side of development choice, remained. They were subject to compensations that did not make them disappear, and even outlined others (Cevallos et al., 2018). These were the contradictions of a “compensatory State” (Gudynas, 2012) that claimed to break with the neoliberal era. Yet, Ecuadorian experience has shown the gap between the utopia of a knowledge-based economy to eliminate dependency on raw materials, and the reality, especially in the Amazon (Acosta, 2010; Wilson, 2021). The principle of compensation was a pillar of the post-neoliberal utopia. We will indicate just three potential sources of funding:

- Increased participation of the proceeds from petroleum activity in the nation's budget and the national development plan;
- Earmarking proceeds from petroleum activity for the development of territories and communities that were most affected by the exploitation of resources;
- Pressure exerted by the State on all operators in the sector so that they developed a targeted policy of social and environmental responsibility.

Massive recourse to compensations was made possible by the 2008 Constitution as well as a well-equipped legislative and regulatory apparatus that was both progressive and complex (Juteau, 2019). Oil revenue was of greater benefit to public finances. The portion of this revenue allocated to compensations grew and the State established public enterprises tasked with their implementation.<sup>1</sup> In practice, local actors (public authorities and communities) were kept away from these compensation processes (Cevallos, 2015) that were nevertheless devised in their direct interest. Oil operators or the national government kept control over drafting and implementation of compensations that did not disrupt the highly asymmetrical power relationship between the actors, possibly transforming damage linked to extracting activities without making it disappear, and sometimes even increasing the vulnerability of already affected territories and communities.

### 2.3. The trickle-down impact of oil to transform the neglected city of Esmeraldas

The city of Esmeraldas is the capital of the province bearing the same name located in north-western Ecuador, on the Pacific coast and on the border with Colombia (Image 1). The city is the only crude oil export outlet in the country. It hosts major energy infrastructures, such as the terminals of two pipelines, linking it to the oil drilling fields of Oriente, namely the SOTE pipeline built in 1970–1972, and the OCP (*Oleoducto de Crudos Pesados*) pipeline, which has backed up the first pipeline since 2003; the Balao marine oil terminal with its storage facilities (contemporaneous with the SOTE pipeline); the sea port especially adapted to oil activities (during the 1970s), the *Refinería Estatal de Esmeraldas* – REE refinery (built between 1974 and 1977), the largest in the country, and also thermoelectric generators (1978–1981), the last phase of which, the *Termoeléctrica II*, was inaugurated in 2014 (Image 2).

The accumulation of these major challenges for the country's economy and security raised even more questions as the site of Esmeraldas is exposed to several, very considerable threats. It is located on Pacific's active rim, affected by significant earthquakes (Nocquet et al., 2017) and by related tsunamis (Rebotier et al., 2019a). The hilly relief made up of unconsolidated material combined with precipitation patterns affected by El Niño provide conditions conducive to numerous landslides that damage linear infrastructures. Finally, because of their water requirements, the industrial facilities are located close to rivers. Yet the Rivers Esmeraldas and Teaone are often swollen, and integrity of the sites is threatened by flooding.

The major, and highly exposed, energy infrastructures go hand in hand with the city of Esmeraldas' significant vulnerability. Esmeraldas, the country's main Afro-Ecuadorian city, today has a population of over 200,000, and the city lacks services and housing (Valdivia, 2018). Regular access to running water is still problematic, the condition of buildings is very mediocre (a relatively moderate seismic tremor at the end of March 2022 caused severe damage to over 700 housing units, SNGRE, 2022), and over 60% of construction development is on illegally occupied land. The city of Esmeraldas is known for having few of its own economic resources and technical means, and being marked by a form of client politics when it comes to public policy (Luque et al., 2013).

And yet, the city of Esmeraldas has enjoyed several cycles of great economic prosperity, based on the extraction of different primary resources. Tobacco and cocoa at the turn of the 19th and 20th century, tagua, or vegetable ivory, during the World Wars, then bananas from the

end of the 1940s and for about a decade (Mérida, 2020). Up until then, it was the “river” town that took advantage of these seesaw activities. Then petroleum activities largely transformed the urban landscape, by installing in the south and polarising the dynamics of urban sprawl towards these areas. The “oil” city then attracted people, often from the interior of the province, who swelled the ranks of the growing stratum of urban working class (CONADE, 1980). Then, more recently, with the arrival of Rafael Correa to power, significant investments were granted in the northern part of the city, the city “of tourism”, where it was through this sector of activity that the national executive branch of government (and, in part, also the local branch) sought to energize the urban economy and to provide levers to boost development and employment (Image 2).

Economic cycles based on a rationale of extraction shaped regimes of accumulation in which local actors and populations barely drew any benefit. From the German and English trading houses, to the economic resources of petrol companies and also multinational banana enterprises and major national capitalist players, Esmeraldas has always been a region of economic exploitation based on resource extraction (Lapierre Robles and Macías Marín, 2018). The economic value circulated: it was captured by investors and players, both national and international. However, the negative consequences of extraction and exploitation remain in situ. They affect the urban fabric, the socio-economic profile of the inhabitants, the characteristics of local institutions and even risks.

With regard to oil-related activities, damage was identified as early as the facilities construction phase, and also in surveys of air pollution with the effects on residents' health being difficult to measure today (CONADE, 1980; Sandoval Moreano, 1990; Jurado, 2006; Barraza et al., 2020). In 1998, a spectacular industrial accident took place when the river was set ablaze, burning down hundreds of houses along the river banks and causing the death of several dozens of people (Granda Gordillo, 2008). A massive landslide ripped open pipelines to the south of the city, and oil flowed into a tributary of the Teaone. The petrol on the water's surface caught fire all the way to the Ocean (Image 3).

As a result of development conditions, a long process of marginalisation and the strategic oil-related activities found there, Esmeraldas was directly caught up in the principles of compensation and re-distributions introduced in Correa's first term under the 2008 Constitution. This involved compensating damage arising from resource exploitation and also promoting the development of neglected sectors. The State intervened directly, right from the start of the 2010s, not only by prioritising sectorial investment (per ministry) but also by channeling additional funds sourced from oil revenue and directly operated by the State. The State also weighed in on social and environmental responsibility policies of energy operators in charge of rolling out social and environmental compensation within the territories. Multiple mechanisms set up by the “compensatory State” and promoted through a highly proactive approach saw the arrival of several hundred million dollars in the urban territory of Esmeraldas between 2009 and 2018.

Here, we propose carrying out the analysis of these resources allocated to Esmeraldas in order to measure their impacts firstly on risk situations and secondly on the city's development (facilities, infrastructure, institution, etc.).

### 3. Methodology and material

The Ecuadorian's “compensatory State” rationale for redistribution embodied a broader notion of compensation that involved the payment of record debt incurred with the dominated and invisible (and the territories occupied by them), as well as compensation for socio-environmental damage arising from oil exploitation. It is very difficult (if not impossible) to retrace all the investments made in the territory of Esmeraldas in the name of this broad notion of compensation. Having said that, by gathering several sources of information over the 2009–2018 period, it is possible to piece together the circulation of these funds, their impact on the territory's strategic facilities, on the

<sup>1</sup> This is the case of EEEP (*Ecuador Estratégico Empresa Pública*), created in 2011. Commencing 2012, EEEP managed oil revenue, a lever for action in the “compensatory State”. Changes in EEEP's articles of incorporation, through successive decrees defining its purpose (2011, 2012, then 2015), illustrate the increasing control exercised by the State of development choices, to the detriment of local actors (public and private) who could only acknowledge such choices.



Image 3. Headlines on 28 February 1998 from *El Universo*, a daily newspaper (head office in Guayaquil), showing the burning river after an oil pipeline ruptured near to Esmeraldas.

inhabitants and also on the relationships between actors.

Analysis of Esmeraldas compensation funds lies in the examination of 5 databases. Four of these databases concern the social compensation programmes of the main energy sector operators: PetroEcuador (a public company in charge of operating the REE refinery), OCP (a private company with a concession to manage the pipeline built to back up the

SOTE in 2003), FLOPEC (a public company established in Esmeraldas in 2015 and tasked with oil transportation) and CELEC (a public electricity company in charge of the thermoelectric power stations). The fifth database is retrieval from the registers kept by SERCOP, the governing body of the national public procurement system in Ecuador (Table 1).

The 2008 constitution came with a legislative and statutory arsenal

Table 1  
Overview of available databases (original) and reworked for analysis (cleansed).

	ORIGINAL DATABASES			CLEANSED DATABASES				
	Period	# Lines	Amount in US\$	Period	# Lines	% Lines kept	Amount in US\$	% Amount kept
PetroEcuador	2000–2018	95	163,237,921	2009–2018	28	29	147,710,707	90
OCP	2005–2016	43	858,545		25	58	362,098	42
FLOPEC	2015–2019	14	429,562		10	71	343,150	80
CELEC	2008–2015	15	3,561,791		14	93	3,500,182	98
<b>Total Compensations</b>		<b>167</b>	<b>168,087,819</b>		<b>77</b>	<b>46</b>	<b>151,916,137</b>	<b>90</b>
SERCOP	2009–2019	1488	958,870,046		611	41	178,080,914	19
<b>GENERAL TOTAL</b>		<b>1655</b>	<b>1,126,957,865</b>		<b>688</b>	<b>42</b>	<b>329,997,051</b>	<b>29</b>

bolstering compensations. Consequently, we sought information in the SERCOP registers for the years available since 2009 with regard to public procurement contracts entered for works (*obras*) and consultancy (*consultoría*), and which involved the territory of Esmeraldas city. In making these choices, the most substantive operations in the area (or intentions of operation, through consultations) were singled out as regards public action and social compensations. The database provided by SERCOP runs from 2009 to 2019. It comprises 1488 lines for a total amount of close to US\$ 959 M. Cleansing the database consisted in eliminating the data for 2019, as incomplete, and in verifying that each disbursement applied explicitly to the urban territory of Esmeraldas. When in doubt or lacking precise information, the disbursement in question (the line) was eliminated. This conservative choice resulted in a database comprising 611 lines for a total amount of over US\$ 178 M.

Two main criteria were applied when cleansing the compensation databases of energy sector operators: the decade 2009–2018 and the explicit connection of disbursements to the urban territory of Esmeraldas. These databases more directly concern the territory of Esmeraldas, in the vicinity of production activities. Fewer data were eliminated (Table 1).

In the end, the 5 cleansed databases were compiled into one, integrated per disbursement period (2009–2018) with regard to the urban territory of Esmeraldas.

A location has been indicated for each of the 688 disbursements selected according to 5 modalities that refer to a morpho-economic perusal of the city (Rebotier et al., 2020; Image 2): north (the ocean city – and tourism), centre (the river city – and bananas), south (the oil city), *barrios aledaños* (a category that describes the space assigned to the immediate vicinity of the energy activities),<sup>2</sup> the city (for disbursements that most certainly concern the city but which could not be more precisely pinpointed).

These data gather together disbursements made mainly under the Correa government to Esmeraldas as part of a broader notion of compensation enabling several analyses to be carried out: on the entities executing these disbursements, on the scales of management, on the distribution of disbursements in the city and their spatial consequences.

#### 4. Results

In the period 2009–2018, the amount of disbursements linked to social compensations (US\$ 152 M) was comparable to that of the public procurement contracts selected, also bolstered by oil revenue from the compensatory State (US\$ 178 M).

As for the compensations, PetroEcuador ensured the most part (97% of the total), followed by CELEC (2%), OCP and FLOPEC. At the beginning of the 2010s, the national executive branch of government accumulated a body of converging legal and statutory pointers towards enacting the compensations. It also availed itself of political influence. In this respect, PetroEcuador was tasked with financing the drainage network and asphaltting the streets in the *barrios aledaños* to the south of the city, around the refinery. This demonstrates the attention given to the preferential zones of intervention that were the subject of more targeted compensation initiatives. These works, which amounted to several tens of millions of dollars, weighed on the final sums.

Numerous public institutions of nationwide stature appear in the SERCOP database. This is the case for provincial representations of several ministries that made disbursements with regard to sectorial policies (health, education, etc.) while national priority was given to marginal territories (Esmeraldas being among them). This was also the case for national operators working locally, such as the Esmeraldas Port

<sup>2</sup> The *barrios aledaños* only concern the areas in the vicinity of the energy installations to the south of the city. They can be considered as a “south” sub-modality. It is still interesting to single them out as they have a particular status in the compensatory regime.

Authority (APE) at the mouth of the river, to the north of the city. In the SERCOP database, the cumulative sums invested by the municipal authority between 2009 and 2018 appeared to be minor: + US\$ 16 M representing 9% of the total (less than 5% if considering all investments – SERCOP and compensations – that affect the urban territory). The low investment capacity of GADME (the decentralized autonomous government of the metropolitan district of Esmeraldas) must be seen in the light of its budget (US\$ 24 M less in 2013, year of PetroEcuador’s multimillion investment).

Although the 2008 constitution anticipated the rise in power of local public authorities through a decentralisation process, it was rather a form of deconcentration that was observed (Rebotier, 2015), combined with a high concentration of central government in certain policy areas and prerogatives. This was, for example, the case for reconstruction following the April 2016 earthquake, which mostly concerned the Ecuadorian coast to the south of Esmeraldas, that was not without situations of corruption and suspicious dealings (Waldmueller et al., 2019).

Generally speaking, the transfer of funds and jurisdiction to local authorities was subject to the latter’s capacity to assume them. Yet, for the city of Esmeraldas, its low institutional capacities along with the impact of client politics and local corruption were all reasons not to delegate the administration of funds. At the same time, the national strategic interest represented by this oil-rich territory (all the more so for the compensatory State) encouraged control to be kept of funds siphoned by compensatory logic, accomplished here through more centralised management. So the territory of Esmeraldas was affected by massive investments which almost all eluded it. In a certain way, the city found itself stripped of any means of action in its territory. It could only follow – even endure – the momentum generated (Table 2).

The spatial distribution of these considerable sums is highly contrasted between the south, the north and the centre. Over half the total sums (54%) concern the south of the city (36% + 18%). The rest is spread between the north (19%), the centre (16%) and the whole city (10%).

The southern part of the city is more marked by energy activities and the most recent urban dynamics. Nearly two-thirds (21% + 40%) of energy operator compensations were rolled out here. In the south, the preferential intervention zones concerned an area limited to a few neighbourhoods in the immediate vicinity of the infrastructures (Image 2). They were the primary sector to receive energy operators’ social compensations (40%).

One-third of the SERCOP amount concerned the north, compared to only 4% of the social compensations. The amount concerning the north even reached 43% of the SERCOP total when just one investment of over US\$ 46 M is taken out of the equation (a new public hospital pressed for by the national executive branch) located to the south of the city and which escalates the representation of this geographic sector. The northern part of the city faces the ocean and engages in tourist and port activities. It is, for example, in the north where APE investments can be found (over US\$ 21 M over the period in question), and also the construction of FLOPEC’s head office (pressed for by the national executive branch), one of Esmeraldas energy operators (for over US\$ 25 M), accompanied by redevelopment of the sea front, today a tourist hotspot known by the name of *Balneario de las Palmas*.

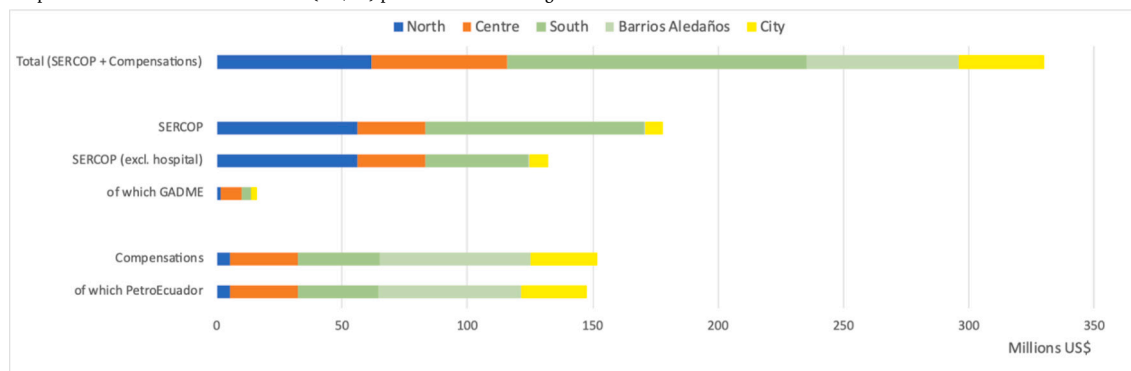
With regard to all the disbursements (SERCOP and Compensations), the city centre appears to have taken a back seat. Nevertheless, it is the oldest part of the city, houses local authority headquarters and, with its riverbank location, was a throbbing business hub during the heyday of banana exports. It was here that over half (52%) of the GADME disbursements were concentrated. Let’s not forget that in the 2009–2018 period, in absolute value (US\$ 16 M) as well as relative value (less than 5% of all sums considered), municipal disbursements were derisory. The part of the city on which GADME focused (the centre) was largely neglected by “extra-local” investments, which eluded the control of the city, if not its influence, and deeply affected both its morphology and



**Table 2**  
Spatial distribution of public investments in Esmeraldas (SERCOP + Compensations).

a. Relative spatial distribution (in %) per source of financing								
	% North	% Centre	% South	% Barrios Aledaños	% City	% General Total	% SERCOP Total	% Compensations Total
<b>Total (SERCOP + Compensations)</b>	<b>19</b>	<b>16</b>	<b>36</b>	<b>18</b>	<b>10</b>	<b>100</b>		
• SERCOP	32	15	49	0	4	54	100	
- SERCOP (excl. hospital)	43	21	31	0	6	40	74	
- of which GADME	11	52	23	0	14	5	9	
• Compensations	4	18	21	40	18	46		100
- of which PetroEcuador	4	18	22	38	18	45		97

b. Spatial distribution in absolute value (US\$ M) per source of financing.



management.

The presentation of these results calls for the discussion of three additional points. On the one hand, cleansing the databases led to 71% of the amounts initially gathered being removed. Further examination of the data enables other sources of public investment made in the territory during the course of the 2009–2018 period to be considered. On the other hand, the asymmetry between the amounts posted for the municipality and for the national institutions or their local representations raises questions as to the governance of these funds and the management of the territory. Finally, it is appropriate to explore the impacts of these massive investments on the conditions of development and risk in Esmeraldas.

## 5. Discussion

### 5.1. Some compensations under the radar

Cleansing the data led to over 80% of the disbursements recorded in just the SERCOP database to be removed on the grounds that the link with the urban territory of Esmeraldas was not explicit (Table 1). Beyond these data selected for analysis, other sometimes considerable disbursements were made in the city between 2009 and 2018.

The large amounts detailed in the database first come to mind (US\$ 25 M for the FLOPEC building and redevelopment of the sea front *Balneario las Palmas*, US\$ 46 M for the hospital in the south, US\$ 51 M for drains and asphaltting of the streets in the southern part of the city) and which do not correspond to the final costs (which, based on interviews, respectively stand at US\$ 55 M, US\$ 80 M and US\$ 85 M).

In the field, other major investments can be found that do not appear in the SERCOP database for public procurement contracts, on the grounds that the disbursement was an isolated case made under an exceptional regime as an extraordinary measure with regard to the sector concerned, the “urgency” linked to the conditions of development, or as part of post-2016 earthquake reconstruction. This regime involved a different recording procedure. It concerns the construction of the *Centro de Atención Ciudadana*, a building to house public administration offices in which users could be welcomed (inaugurated in 2016

for US\$ 20 M), the traditional fishing port refurbished in 2014, a health centre and even the head office of ECU 911 (the centre for crisis management and rescue organisation). This was also the case for the road link to Esmeraldas airport, inaugurated in 2011 for US\$ 9 M. All these investments from the central government are not detailed in the SERCOP database and concerned the north of the city in the immediate vicinity of the river mouth (Image 2). Mention should also be made of the US\$ 3500 M invested in the modernisation of the Esmeraldas Refinery (REE), to the south, between 2011 and 2015.<sup>3</sup>

These strategic State investments mostly responded to the compensatory and redistributive logic for the development and catching up of the nation’s marginal territories. Their distribution in space accentuated observed trends (especially to the north, but also to the south of the city). The regime of urgency in which these multimillion disbursements were made cast suspicions of corruption (on the difficulty of controlling expenditure) and their electoral instrumentalisation.

### 5.2. Highly asymmetrical governance of compensations

Generally speaking, the way in which institutions dealt with the invested sums as part of a broad notion of compensation reflected the permanency of a dominant national level and the exclusion of the local public actor, even though the investments directly concerned the urban territory. Compensation funds did not get as far as the municipal budget. They continued to be administered by the oil operators, or national institutions, from the nation’s general budget or sums drawn from tapping into oil revenue intended for the development of the country’s margins. In fact, GADME was kept away from this compensatory windfall controlled by powerful actors (national and in the energy sector) even though the decentralisation process introduced by the 2008 constitution made the local public actor pivotal in the planning and development of the municipal territory. This can be largely explained by deep-seated racist preconceptions and a longstanding, multifaceted process of

<sup>3</sup> And the subject of critical assessment, even suspicions of corruption (ICC-TECNATOM, 2018).

marginalisation.

On a larger scale, commitment of social compensations from the energy sector was barely institutionalised (despite the existence of “community relations” procedures). Concerning PetroEcuador (97% of the total amount of compensations), compensation disbursements fell into two categories. The macro-projects (such as the provision of a wastewater system to the south of Esmeraldas) were part of the national executive’s development agenda. As for the micro-projects, they followed a more flexible logic. Their choice lay in the changing relationship between the company and the neighbourhood organisations that solicited its attention. The capacity of neighbourhood organisations to access PetroEcuador’s compensation funds depended on factors of a political, organisational, interpersonal, etc. nature (Cevallos, 2015), which made compensation distributions fairly unfathomable. In these cases, the municipal authority was no longer systematically included in either the programming or the performance of the works.

### 5.3. Detrimental consequences of compensations with regard to risks

Considerable sums thus transformed the urban territory of Esmeraldas in the name of compensation. Their spatial distribution was not part of a territorial vision shared with the municipality. It was not even part of a territorial vision shared by the central actors who were directly involved and the energy companies that administered the social compensations. In the field of risks, the consequences of these forms of compensatory investments were detrimental on at least three accounts: in terms of exposure of the main assets, conditions of development and territorial governance.

- With regard to exposure, the city of Esmeraldas is affected by landslides and floods (relatively frequent with moderate damage), and also earthquakes and associated tsunami events (low frequency with potentially considerable damage). The distributions of disbursements selected for analysis mainly targeted the north and south of the city. It is here that the most significant cumulated amounts were to be found (for example the FLOPEC building and the *Balneario las Palmas* – Image 2). It was also in the north that the disbursements made directly by the national executive branch were concentrated and which do not appear in the SERCOP database. Yet these multi-million investments were all in a flood zone or located on the oceanfront, particularly exposed to the risk of tsunamis (Image 4). The option of a momentum highly bolstered by compensatory disbursements in the north considerably increased exposure of the city’s infrastructures.

The *50 Casas* neighbourhood located on a meander in the river can be found to the south of the city, in the vicinity of CELEC’s thermoelectric plant, situated between the REE and the River Teaone (Image 2). On the one hand, the conditions of flooding in this district are affected by works protecting the energy facilities installed on the concave left bank of the river (Image 5). On the other hand, this regularly flooded neighbourhood received social compensation disbursements from the energy sector during the 2009–2018 period. Especially to be found are concrete streets, some are asphalted, and two schools (one new build, the other renovated) located in a flood zone (in the lower right bank).

Although it is legitimate to seek to improve living conditions in the precarious urban sectors of one of the most marginalised large towns in the country (the rationale behind compensations), these major investments in neighbourhoods at risk also generate situations of increased risk. This district, situated in a flood zone, is also the next-door neighbour of energy facilities. It is located within the perimeter of “immediate danger for life and health” in the event of chlorine, ammonium or hydrogen sulphide emissions from certain REE plants (Image 6). Despite this, the *50 Casas* neighbourhood has been consolidated through compensations. The assets have increased without any measures being taken to mitigate the hazards or adapt buildings, or any

other measures to reduce vulnerabilities.

- Generally speaking, at the end of the period studied, there was no obvious improvement to the state of the city. Water supply remained erratic, budgetary extensions for urban structural works were still on the agenda. Buildings were still run down, the city with over 200,000 inhabitants had neither a library nor a cinema and despite the hospital to the south intended to meet the province’s needs, many still travel as far as Portoviejo (a 5-h drive) or Quito (a 7-h drive) for medical treatment. Since the COVID pandemic and liquidation of the national airline TAME, flight connections to the capital have been suspended. Finally, the vacuum left by the health crisis and development of illegal cross-border drug trafficking activities with Colombia have aggravated delinquency and conflict between rival groups in Esmeraldas. Some riverbank districts (such as *El Pampón*) and hillside areas close to the centre (such as *El Gatazo*) have been literally taken over by criminal gangs, preventing any action on the part of legal institutional actors (Image 2).
- Ultimately, the municipal authority found itself deprived of several possibilities for action in its territory. National public actors and energy companies established their domination. Significant portions of the urban territory withdrew from the authority of GADME, whether in the strategic energy sector, central actors (APE, military actors) or, as is the case today, criminal gangs involved in drug trafficking. The considerable sums of money affecting the urban territory were administered in such a way that they also undermined capacity for the management and oversight of development in Esmeraldas. Reconstruction of Esmeraldas’ city hall only started in 2022, 6 years after the 2016 earthquake, while the municipal service departments are still scattered around the city in 14 different locations. GADME governance capacity is clearly and permanently in question. Piecemeal compensatory investments served fragmented interests and visions. They produced contradictory effects and especially increased risk situations for sectors that were already marginalised. The city, deeply mistrusted and even despised by energy operators and national actors, lacked its own financial resources and skills, and still does not have any functioning land registry to accompany its territorial dynamics.

## 6. Conclusion

Markers of unequal and sometimes detrimental development based on compensatory logic can be found in Esmeraldas. Resource exploitation persisted (and in its wake, degradation) while compensations escalated locally. But these compensations resulted in heightened exposure of an increased number of assets as well as in the disruption of local institutions and social structures. Ultimately, they brought about a decline in democracy.

For these multiple reasons, the risk situations worsened in the city even though compensations in the neoextractivist era were supposed to improve the living conditions of the most directly concerned populations. We find here a deep paradox between what is announced and the reality. Despite clear limitations (and obvious failures), how can these “fail forward” mechanisms (Fletcher, 2023) be understood? Is it because they maintain convenient power relations? The case of Esmeraldas illustrates the multiple and complex ways in which perverse and failed mechanisms keep working and strongly frame risk and environmental management. Here, urban governance is constrained by a neoliberal-inspired management of compensations that relies on (and supports) a longstanding process of marginalisation, and, more recently, of commodification (for the case of Amazon region: Wilson and Bayón, 2017).

It is difficult to put forward the argument of lack of means given the considerable sums involved. Esmeraldas, on the other hand, appeared to be a city stripped of its capacities for action and management due to a system of governance comprising piecemeal and centralised

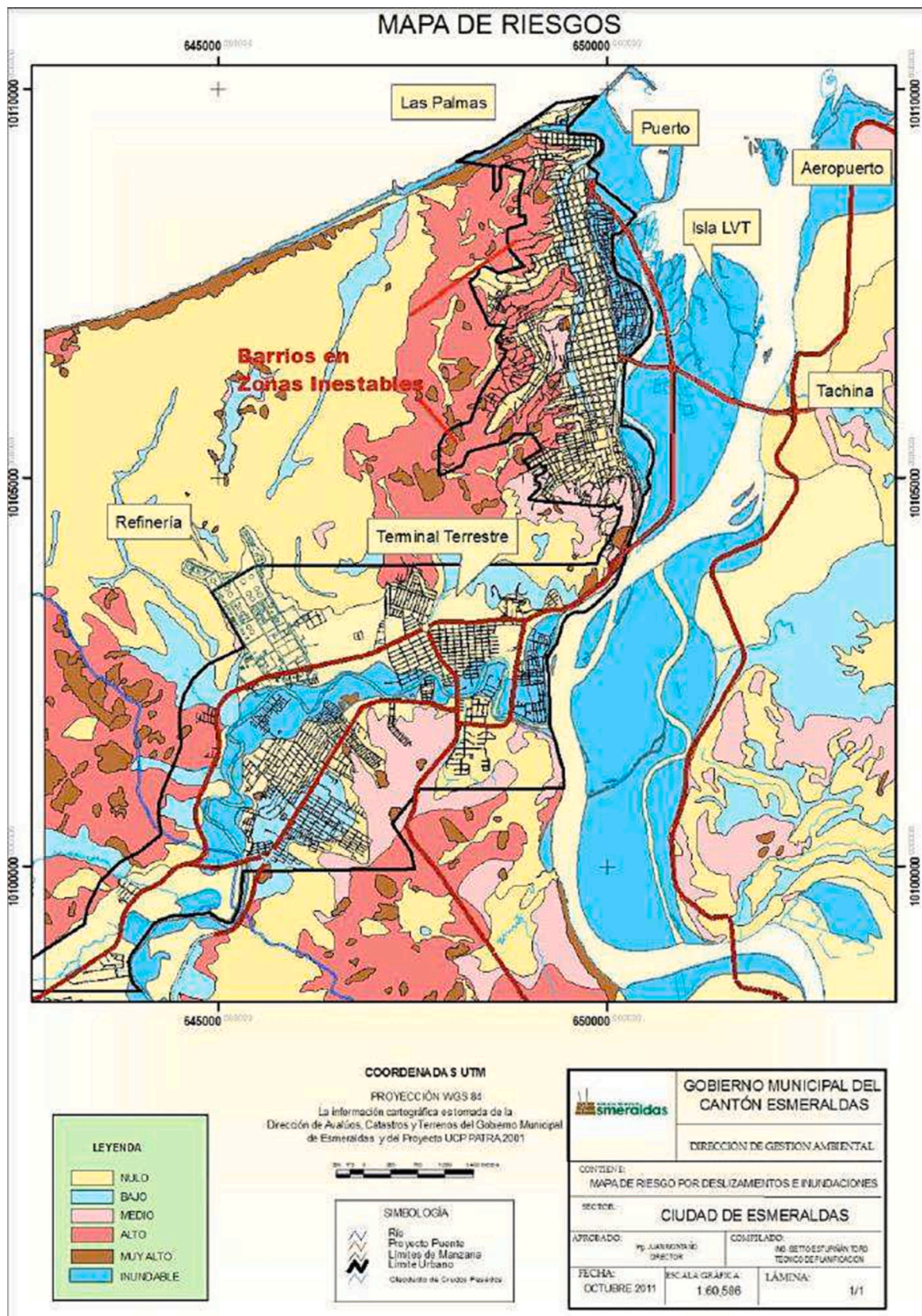
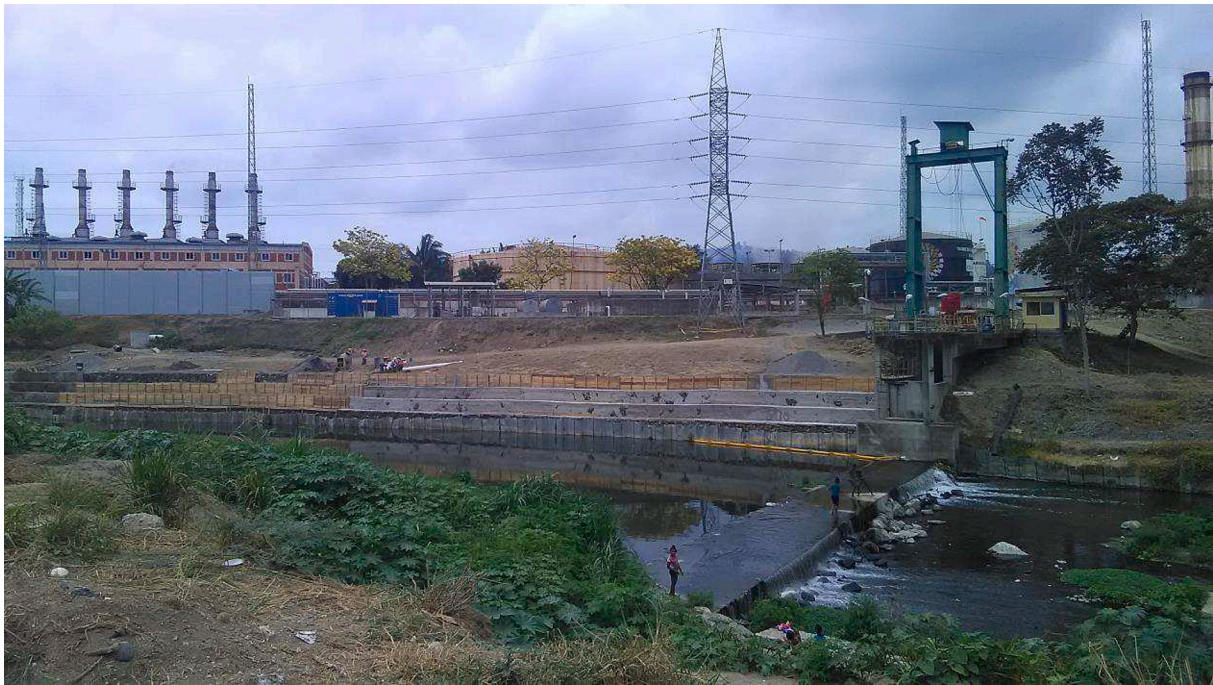


Image 4. Map of areas exposed to risks of landslides and flooding in Esmeraldas. Source: GADME, 2012, p. 37.



**Image 5.** View of the *Termoeléctrica II* plant on the left bank of the Teaone. Photo: Julien Rebotier (in 2018).



**Image 6.** Perimeter of immediate danger for life and health in the event of sulphur emissions from the Esmeraldas Refinery. The *50 Casas* district, located in the meander of the river, is inside the circle, to the right. Source: PSRG, 2014, p56.

compensations. It was more a question of policy and the eminently asymmetric balance of power between actors than it was an economic problem. Broadening the scope of risk assessment and compensations analysis by considering territorial and social dynamics allows light to be shed on the diversity and complexity of deep-rooted drivers involved in the reproduction of under-development conditions. While more technical literature usually pays special attention to the opportunity, relevance, acceptability and consequences of compensations as a strategy of environmental management, a more contextualized and territorial approach of the same issues frames the problem in a slightly different way. It states that environmental issues (like risk situations) and the ways they are handled (here, through compensations) actually mirror a

social order and existing asymmetries, in many cases supported by market mechanisms. Giving room to such complexity in the analysis breaks with more neoliberal views that favour the commensurability and equivalence of everything.

The city of Esmeraldas was kept in the position of subordination required to perpetuate the national development model founded on oil exploitation. The precarity, subordination and ultimately the vulnerability of Esmeraldas were not the negative externalities of neo-extractivism: they were the conditions required for it. They enabled central actors and energy sector operators to preserve their dominant position in order to perpetuate the chosen modalities of national development. Compensations were one of the instruments for such

permanency. They were a mechanism for the transfer of risk (in time, space and between social groups) that enabled some people in some places to bear the burden of the detrimental effects of development choices.

In no case whatsoever did compensations call into question or provide a solution to the root causes behind the situations of urban risk, particularly for the territories and population sectors that were among the most marginalised. Compensations were the ransom that some paid for the development undertaken by others and from which these others mostly profited. It is not so much the distribution of revenue that should be questioned but rather the terms of the problem – and knowledge – that should be changed (Mignolo, 2005).

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## Declaration of Competing Interest

The author declares that he has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Original data supporting the findings of this study are available from the respective institutions mentioned. Edited data are available from the author, upon reasonable request.

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