“Neither leave here, nor die here, but really live here”
Milestones for a social history of anti-pollution movements in the Berre/Fos-sur-Mer industrial port zone

Xavier Daumalin and Christelle Gramaglia
Fos-sur-Mer, vue depuis le cimetière, © Matthieu Duperrex
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Milestones for a social history of anti-pollution movements in the Berre/Fos-sur-Mer industrial port zone*

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Abstract: No other Mediterranean area has been marked for so long by environmental conflicts as the coastal strip between Fos-sur-Mer and the banks of the Etang-de-Berre. Regular individual and collective demonstrations have taken place for more than two hundred years, some violent, structured and recurring, others less so, to draw the attention of the public authorities to the risks and nuisances from the industrial boom. The purpose of this article is to intersect the sociological and historical perspectives with a triple goal: 1. understand better the efforts made by host societies to withstand successive, diverse and dense industrial pollution; 2. identify the various characteristics of a long-term and frequently unequal balance of power; 3. attempt to highlight common features and changes in how this type of conflict is conducted. It relates the story of a dispossession and the several ways in which it occurred, often violently: appropriation of communal spaces, setting up barriers or bans around industrial facilities or capturing and degrading local environmental resources and assets. It highlights symmetrically the resistance of affected populations in protesting and demanding more salubrious living conditions or their rights to access and use the land snatched from them.

Keywords: pollution, industrial risks, mobilisations, environmental socio-history

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Résumé : Aucune autre zone méditerranéenne n’a été aussi longtemps marquée par les conflits environnementaux que la bande côtière entre Fos-sur-Mer et les rives de l’Étang-de-Berre. Des manifestations individuelles et collectives régulières ont eu lieu depuis plus de deux cents ans, certaines violentes, structurées et récurrentes, d’autres moins, pour attirer l’attention des pouvoirs publics sur les risques et les nuisances engendrés par l’essor industriel. L’objet de cet article est de croiser les perspectives sociologiques et historiques dans un triple but : 1. mieux comprendre les efforts déployés par les sociétés d’accueil pour résister aux pollutions industrielles successives, diverses et denses ; 2. identifier les différentes caractéristiques d’un rapport de force durable et souvent inégal ; 3. tenter de mettre en évidence les traits communs et les évolutions dans ce type de conflits. Il raconte l’histoire d’une dépossession et les différentes façons dont elle s’est produite, souvent de manière violente : appropriation d’espaces communaux, mise en place de barrières ou d’interdictions autour d’installations industrielles ou encore capture et dégradation des ressources et des biens environnementaux locaux. Il met en évidence, de façon symétrique, la résistance des populations, leurs protestations et revendications pour des conditions de vie plus salubres ou le droit à accéder et user des espaces qui leur ont été arrachés.

Mots clés : pollution, risques industriels, mobilisations, sociohistoire environnementale

INTRODUCTION

No other Mediterranean area has been marked for so long by environmental conflicts as the 50 kilometers coastal strip between Fos-sur-Mer, the banks of the Étang-de-Berre, and Marseille. Regular individual and collective demonstrations have taken place for more than two hundred years, some violent, structured and recurring, others less so, to draw the attention of the public authorities to the disadvantages and hazards incurred by the boom in industry in a region that for a long time has been the preserve of farming and pastoral activities, salt manufacturing and fishing1. This depth of focus is the foundation for the methodological bias adopted intersecting historical and sociological perspectives. With a triple goal: understand better the efforts made by host societies to withstand successive, diverse and dense industrial pollution; identify the various elements (players, talks, alliances, arbitrations) of a long-term and frequently unequal balance of power; and attempt to highlight common features and changes in how this type of conflict is conducted. For the sake of clarity, the scansion of our

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analysis rhyme with the high points of industry from the early 19th century to the present day. This periodisation demonstrates the varied and repeated interest aroused in the coastal strip between Fos-sur-Mer and the banks of the Etang-de-Berre during the past two centuries, and not solely from the 1960s onwards, when major State development and industrialisation projects came to fruition. This is still fresh in people’s memories. It relates the story of a gradual dispossession and the several ways in which it occurred, often violently: appropriation of communal spaces, setting up barriers or bans around industrial facilities or capturing and degrading local environmental resources and assets. It highlights symmetrically the resistance of affected populations in protesting and demanding more salubrious living conditions, income protection or their rights to access and use of the land snatched directly or indirectly from them. This sociohistorical perspective proves especially fertile in understanding environmental conflicts, whose intensity is not mechanically correlated with shared observations or measures objectifying the threats despite the legacy of challenges and relations between players, forgotten or recalled, possibly replayed.

**THE FIRST INDUSTRIAL PLANTS**

Industry proper first appeared in Fos and Etang de Berre in the early 19th century, at a time when the whole of coastal Provence was experiencing economic growth. The arrival of soda plants and non-ferrous metal factories over the course of several decades made a lasting impression on the area.

**Heavy industry**

The story begins with the growth of the chemical industry and the deployment of the Leblanc soda-making process on an industrial scale. The circumstances are well known. Marseille’s soap-making industry was heavily dependent on imports of natural soda, but these imports were becoming scarcer due in part to the Peninsular War (between France and Spain) of 1808, and subsequently due to the protectionist and industrialist economic policies pursued by Napoleon I.

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2 The process involved producing soda (now known as sodium carbonate) by decomposing seat salt with sulphuric acid. The acid was obtained by burning a mixture of sulphur and potassium nitrate then condensing the gases emitted during the process of combustion in a lead chamber.


4 The war caused imports of natural soda to plummet and prices to rocket.

5 Napoleon I introduced state protection for the industry through two decrees: the decree of 13 October 1809 (which offered tax relief on sea salt used in soda factories) and the
and later regimes. In response to this shortage, a number of industrialists began implementing the Leblanc process on an industrial scale. This process had been developed back in 1791, but had remained largely unused because natural soda had been so cheap to source. More than 20 soda factories sprung up between 1809 and 1811, and the Marseille region became the world’s leading manufacturer of Leblanc soda. Yet not all of these initiatives delivered industrial success. In 1819, there were 16 factories manufacturing “chemical” (or “synthetic”) soda. They employed around 600 workers, had a combined total of around 50 lead chambers and 180 furnaces, and produced approximately 16,700 tonnes of soda worth an estimated 5 million francs. In 1844, there were 20 soda factories along the coastline, with a combined workforce of around 1,430 and output valued at 14 million francs. Fos and Etang de Berre gained an increasingly prominent foothold in this new industry. The area was home to three companies in 1819 (Fos, Istres and Vitrolles). By 1844, that had risen to five (with seven factories in total), with the arrival of new sites in Berre, Martigues and Lavéra/Le Ponteau. At that time, the factories accounted for 39% of total soda output in coastal Provence by value, and 41% of the industry’s workforce—well ahead of Septèmes (25% of output by value and 24% of the workforce) and the Calanques of Marseille (15% of output by value and 22% of the workforce). In the mid-19th century, Fos and Etang de Berre was the leading soda production area of coastal Provence and Mediterranean France.

Non-ferrous metal (copper and lead) processing was the second industry to establish a lasting presence in the area. Copper factories boomed as Sicilian sulphur—a raw material used in the Leblanc process to make sulphuric acid—became increasingly expensive.\(^6\) Soda manufacturers got around the rising cost\(^7\) by adopting the copper or iron pyrite roasting process—a method initially developed by Lyon-based Michel Perret in 1835.\(^8\) This innovative new process was introduced to Provence by Boyer, Guez & Cie, a soda factory that opened in 1842 on the Chenal de Caronte (a channel linking the Etang de Berre to the Mediterranean). In 1845, the firm deployed it on an industrial scale, roasting copper pyrite imported from Algeria. The Le Ponteau/Lavéra and Rassuen soda factories followed suit in 1851-1855, using pyrite sourced from the Ardèche and

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\(^6\) At the time, Sicilian sulphur accounted for around 30% of the cost price of the sulphuric acid.

\(^7\) The price rises were due initially to the monopoly granted to Taix, Aycard & Cie by the King of Naples, and subsequently to the discovery of sulphur spraying as an effective way of combating powdery mildew on vines in the 1850s.

\(^8\) When roasted in furnaces, pyrites released sulphur vapours which were then condensed in lead chambers to produce sulphuric acid. This new process meant that soda factories no longer needed Sicilian sulphur.
Gard areas of France, as well as from Montecatini in Tuscany. Lead processors were another non-ferrous metal success story, becoming the main driver of Marseille’s metalwork industry in the mid-19th century. Firms operating in this sector imported argentiferous lead and galena from Spain, Italy, Greece and North Africa to the port of Marseille, then extracted the silver and delivered the refined lead to customers in France and throughout the Mediterranean. The movement gained traction in the period following 1847, when several new factories appeared in Marseille and along the coast. At the time, the Marseille region was at the core of the global lead economy and many local factories joined international networks, enabling them to process vast quantities of imported raw materials. The Port-de-Bouc factory near La Lèque was one such example. Built in 1849, it was destroyed in 1854 and replaced with a new lead, copper and zinc processing facility.

**Concerned residents engaging in protest**

Not everyone welcomed these early industrial developments with open arms. The factories routinely raised fears and concerns that were reflected in the language people used to talk about them. Local residents used terms like “industrial villages”, “metal villages” and “modern volcanoes”. Some even went so far as to describe them as “artificial volcanoes in the fields” that “spew death”. In some cases, these fears culminated in protests. Farmers and local residents issued threats, demonstrated, petitioned and brought cases before the civil courts to try to obtain financial compensation for the material damage, loss of enjoyment and loss of rental or sale value to their properties.

Exasperation and a sense of abandonment also prompted riots, such as in the village of Saint-Mitre, where the blame for excessively high death rates was pinned on the nearby Plan d’Aren soda factory. Villagers revolted against the factory time and again between 1828 and 1845, forming dancing processions to the tune of *La Carmagnole* (a song made popular during the French Revolution), throwing stones at the police officers sent to arrest the ringleaders, and calling for the restoration of the Republic. Yet regardless of the method used, and whether or not the grievances were sincere or concealed a hidden motive, almost all of the opponents focused on the same concerns. First, they argued that the fumes were harming the health of people working in and nearby the factories, and of local residents.

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10 Archives communales de Marseille, 23 F 1, *Mémoire de Pierre-Joachim Duroure contre Jean-Baptiste Vidal*, 2 janvier 1816.

numerous petitions submitted to the prefect and articles published in *Sémaphore de Marseille* and *Gazette du Midi*, villagers from Saint-Mitre said that they refused to be condemned “to disease, penury and death” and railed against being “burned (...) at the altar of industrialism”. Petitions and writings from the time paint a vivid picture of deteriorating resources—fields and olive, almond and fruit trees left scorched, declining yields, livestock dying off and failing to reproduce, and local fishermen worrying about the impact of the fumes on aquatic plants and animals, and on their vessels’ rigging. While some opponents decried depleting resources and falling incomes from farming and fishing, others protested against the impact of pollution on the rental and sale value of their properties. Many landowners’ accounts raise similar concerns, stressing that “while it is important to promote industry, it is equally important to protect our land” and that “society can thrive with or without factories, but it falls apart when land and farming come under threat”. Other dissidents argued that the Etang d’Engrenier was once a vital resource for the “poor people of Fos” but, since the arrival of the Plan d’Aren soda factory on its shore, the “water is sometimes yellow or yellowish, sometimes blue, then green” and “the eels and mullet have perished, the shellfish and crabs have disappeared, and the poor people of Fos and their children have been deprived of a vital small-scale fishing resource.”

Industry brought with it great social upheaval and aggravated the plight of the poorest in society. These not insignificant concerns were a strong message to the authorities about what kind of policy they should pursue to rebuild France’s economy, and about the very nature of the economic and social contract in the years to come.

These individual and collective disputes were managed in different ways. Industrialists were fully aware of the controversy and conflict that they could potentially generate and attempted to neutralise the opposition by purchasing surrounding land or paying annual fixed sums to local residents to compensate for future damage. Mayors, and later the prefectural administration (which became responsible for regulating industrial pollution following the decree of 15 October 1810[^13]), referred petitions and applications to build new factories.


[^13]: The decree of 15 October 1810 classified the industries into three categories: the first category included the most dangerous plants- including soda and lead factories - which had to be kept away from dwellings; the second, those “whose distance from dwellings is not strictly necessary”; and the third, those that could be placed near dwellings without inconvenience. The procedure to be followed to set up a plant in the first category includes several stages: request for authorization from the industrialist to the prefect; posting of this request for one month in all municipalities within a radius of five kilometers around...
to experts appointed by the Royal Society of Medicine, and later by the Public Health Council (founded in 1825). When complaints were brought before the civil courts (under the provisions of the decree of 1810), the courts also referred the cases to their own appointed experts. These experts, mostly members of the medical profession and prominent local academics, played a front-line role in measuring how much damage industrial pollution had caused and what standards industrialists who wanted to continue operating would need to meet. Measurements and standards were central to the new balance of power brought about by the rise of industry and to debates around acceptable levels of pollution. Sometimes, experts would set about conducting detailed, months-long investigations on the ground or in the laboratory. Some found in favour of the complainant, forcing industrialists to pay financial compensation that varied according to the circumstances of the case. Yet despite the painstaking and rigorous nature of these investigations, the experts nevertheless lacked knowledge in certain areas, especially when assessing the effects of a new technology. Others demonstrated evidence of inherent methodological or cognitive bias, either through social and/or political complicity with industrialists or the authorities, or because they were blatantly corrupt. Consequently, the approach to industrial pollution management was dominated by administrative, liberal, technocratic and industrialist considerations.

At the core of the second industrial revolution

The coastline at Fos and Etang de Berre experienced a sustained wave of industrialisation and diversification from 1890 onwards. Until 1913, movement was concentrated around Port-Saint-Louis-du-Rhône and Port-de-Bouc where six thousands inhabitants lived. Then later, during the First World War and in the inter-war period, the focus shifted to the Chenal de Caronte, Martigues, La Mède, Marignane, Berre, Saint-Chamas and Istres.


An area in high demand

The growth of industry in the area was shaped by several forces. The first was a desire among Marseille-based industrialists for plentiful, vacant, cheap land with excellent maritime and rail links where they could escape the densely packed basins around the port of Marseille, build replacement or secondary factories without the constraints of urban development, or start up new lines of business. Industrialists across many sectors opened premises at Fos and Etang de Berre. These included a flourmill (Gautier Frères in Port-Saint-Louis-du-Rhône), a cement works (Romain Boyer in Fos-sur-Mer), shipyards (Chantiers et Ateliers de Provence in Port-de-Bouc; Chantiers Navals et Chaudronneries du Midi in Martigues), an oil refinery (La Phocéenne in Port-de-Bouc), an oil and soap factory (Etablissements Verminck in Martigues) and aerospace plants (Port-de-Bouc, Martigues, Istres and Marignane). The industrialists received support from the Marseille Chamber of Commerce and Industry which, since the late 19th century, had sought to turn the Etang de Berre into an industrial periphery of Marseille and had secured permission to build and oversee a new port on the Chenal de Caronte (known as the “annexes”) through the decree of 24 October 1919. Aside from local investment, big national firms (Saint-Gobain and Kuhlmann) set up shop along the Chenal de Caronte after their premises had been bombed in the First World War, supplying explosives to the Saint-Chamas gunpowder works (founded in 1690) before diversifying into chemical fertiliser (superphosphate) production. In addition, French and foreign oil companies—André Fils (Port-Saint-Louis-du-Rhône), Société Générale des Huiles de Pétrole (a subsidiary of Anglo-Persian Oil Company, Lavéra) and Bedford Petroleum (Caronte)—moved to the area to establish depots close to built-up areas where their fuels would be in demand from the maritime and air transport industries (Marignane Airport, now Marseille Provence Airport, opened in 1922).

Figure 1. Factories along the Chenal de Caronte (1927)

Source: A.O. HRT.h 01744 (le détail de la carte de la Province d’Aydn préparé pas S. W. Por)
Taken together, these local, national and international forces served to increase the number of factories and industrial complexes along the coast at Fos and Etang de Berre. But they also had a profound impact on town planning, society and the environment—not least along the Chenal de Caronte. In the early 1890s, Martigues and Port-de-Bouc were home to around 7,400 people. Most made a living from fishing and farming and foreigners made up just 4.5% of the population. The only industrial premises in the area were a dried and salted cod factory, a coal briquette plant and a metal processing works which, together, employed around 500 people. From that point onwards, the number of people working in industry grew steadily, to 720 in 1906 (60% French, 38% Italians and 2% Spaniards), then to 1,790 in 1926 (43% French, 25% Italians, 15% Spaniards, 7% Greeks, 6% Armenians and 2% Algerians). By that same year (1926), the population of Port-de-Bouc and Martigues had grown to 12,820, and 37.5% of the people living there were foreigners—a figure eight times higher than in 1890. Foreign labourers had come to the area in huge numbers to support its industrial expansion.  

Fishermen vs. industrialists  

This second wave of industrial growth, like its early 19th-century predecessor, was a source of concern and conflict, as the old arguments of previous decades re-emerged and new objections came to the fore, reflecting the sensitivities of the age. In a letter to the mayor of Martigues, one opponent of industrialisation raised a relatively new line of argument—that quicker transport links with Marseille “promise a bright future for Martigues, not as an industrial town, but as a seaside resort and holiday destination” for the city’s residents, who “will come here in ever greater numbers to breathe the clean air and admire the picturesque coastline, neither of which they can find in Marseille”. By making the case for tourism, recreation and clean air over industry, the person who wrote that letter understood all too well that the area stood at a crossroads and that further industrialisation—something incompatible with other economic opportunities—could well seal the town’s fate. Fishermen, meanwhile, feared that their livelihoods could be at risk. They were vehemently opposed to the Marseille Chamber of Commerce and Industry’s annexation of the Chenal de Caronte, to plans to build new docks, deepen the channel and form a canal and embankment by filling in the Gaffette and Labillon coves, and to the prospect of more and more

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16 Ibid, p. 223.  
17 Letter from Bazin to the mayor of Martigues, 28 July 1898 (Bouches-du-Rhône Departmental Archives [AD13], 5 M 565).
factories springing up on either side of the channel. In 1921, François Roland, the leader of Martigues fishermen’s cooperative, wrote a strongly worded letter to the president of the Marseille Chamber of Commerce and Industry, expressing his fears about the future of his profession. After failing to have their message heard, the fishermen found a vocal proponent in Charles Maurras, a native of Martigues, joint political director (along with Léon Daudet) of *L’Action française* and member of the *Félibrige* literary and cultural association. Maurras followed in the tradition of Frédéric Mistral who, in the pre-war period, had argued against the dominance of “industrial interests”. He spoke out on numerous occasions in support of Martigues’ fishermen as the embodiment of local and national identity and against the threat posed by existing factories and future industrial growth. Maurras’ message marked a return to early 19th-century debates around local economic identity, but with one difference—he no longer decried the impact of industrial pollution, but rather the destruction, by the actual industrial developments, of fish corrals, the loss of unspoilt waters where fish stocks could be replenished and sustained, the resulting depletion of resources and, ultimately, the annihilation of an ancestral profession. Despite Maurras’ efforts, the balance of power was so unequal that it proved impossible to stop—or even slow—the march of industrialisation. Accepting their fate, Martigues’ fishermen adopted a new tactic, seeking to extract financial compensation from the Marseille Chamber of Commerce and Industry and soliciting support from the Bouches-du-Rhône Departmental Council, the Chamber of Deputies, the Senate and Minister for Public Works Yves Le Trocquer (who oversaw the State Sub-Secretariat for Ports, the Merchant Navy and Fisheries). In his official correspondence of April 1st 1920 and July 29th 1921, however, Yves Le Trocquer—a graduate of France’s Ecole Polytechnique and Ponts et Chaussées engineering schools—indicated that, according to the letter of the law, “the special privileges that Martigues’ fishermen enjoy to fish in public maritime waters do not confer upon them any right to compensation when works performed in the public interest cause alterations to the arrangement of such waters.” Moreover, Le Trocquer rejected their appeal on the grounds that, in his view, its purpose was to “block the reasoned use of the Etang de Berre, on which an entire region’s future economic prosperity


19 Memo from engineer A. Bollard, 23 July 1930 (AD13, 1937 W 327).
“Neither leave here, nor die here, but really live here”

depends”.20 Similar arguments were put forward by local engineers responsible for the case (from the roads and bridges, fishing vessel registration and Ponts et Chaussées) by the Marseille Chamber of Commerce and Industry.21 In the early 1920s, the views and concerns raised by Martigues’ fishermen were downplayed and ignored to allow the pursuit of an industrial development project led jointly by the Marseille business community, central government and the engineering group. Seeking to justify the project and paint the opposition as backward and self-interested, proponents framed the plans as reasoned, modernising and guided above all else by the public interest (growth and job creation).

**From the “Trente Glorieuses” to the “Trente Ravageuses”**22

Industry gained a foothold in the Fos/Etang de Berre region through the favourable context created by the twists and turns of the domestic and international oil industry during the 1950s to 1970s (as hydrocarbon consumption grew steadily and the Middle East took over from the Gulf of Mexico as the world’s major oil-producing region), the collapse of the colonial market, the creation of the European Economic Community and the State’s proactive approach towards regional and national economic development (5th and 6th plans).

**Persistent heavy industry**

The exceptional boom in hydrocarbon traffic through Marseille—very nearly 95 million tonnes in 1974—and the hype in the race to build ever larger oil tankers since the closure of the Suez Canal (1956) prompted the economic leaders of the day to expand their oil infrastructures, in conjunction with the State. The result was an increased capacity in the Port of Lavéra (opening of a second tanker berth in 1953, followed by a third in 1959), construction of a European south pipeline (1959-1962) to supply the refineries in Strasbourg and Karlsruhe and the creation

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20 Id., ibid.
21 Decisions of 25 April 1922 and 27 January 1925, adopted under the chairmanship of Hubert Giraud (ship-owner and key player in the Caronte industrial development project) and oil and soap magnate Émile Rastoin.
22 This expression of “Glorious Thirty” refers in France to the period of economic development following the second world war. These decades have been recently renamed “Polluting” or “Destructive Thirty” by historians Christophe Bonneuil and Stéphane Frioux, see : “Les “Trente Ravageuses”? L’impact environnemental et sanitaire des décennies de haute croissance”, dans Céline Pessis, Sezin Topçu et Christophe Bonneuil (ed.), *Une autre histoire des “Trente Glorieuses”. Modernisation, contestations et pollutions dans la France d’après guerre*, Paris, La découverte, 2013, p. 41-59. For other details see Patrick Fournier, Geneviève Massard-Guilbaud (ed.), *Aménagement et environnement. Perspectives historiques*, Rennes, PUR, 2016.
of a new deep-water port in the gulf of Fos (1961-1968) capable of berthing tankers over 100,000 tonnes. The Port of Marseille—henceforth managed by the Port Autonome de Marseille since 1966 (PAM—Marseille Harbour Authority) rather than the Marseille Chamber of Commerce—remained more than ever an oil port, now extending to Fos and Lavéra. The arrival of specialist petroleum product factories in the area from the late 1940s onwards also supported the growth of the refining industry, as demonstrated by the opening of a fourth refinery in Fos in 1965 (Esso). In 1947, Société pour l’Utilisation Rationnelle du Gaz (a subsidiary of Shell and Saint-Gobain) opened up premises in Rognac. In 1949, Pechiney, Kuhlmann and SGHP (part of BP) founded Naphtachimie in Lavéra. In 1957, California Spray Chemical Corporation launched operations near the Kuhlmann factory in Martigues. And three firms—Shell-Saint-Gobain (1953), Cabot France (1957), and Société des Élastomères de Synthèse (1959), a subsidiary of Shell-Saint-Gobain, Michelin and Cabot-Texas—set up business in Berre. The petrochemical industry was born in the Fos/Etang-de-Berre region. These modern, almost fully automated factories employed fewer workers than their local industrial predecessors and yet they were seen as “money-spinners” because they delivered import cost savings and produced high-value exports.

Certain Marseille businessmen, including Pierre Keller, Edouard Rastoin, Léon Bétous, Paul Fabre and Pierre Terrin, also campaigned to prevent the activity of the new port of Fos being restricted to oil. They increased the initiatives and lobbying for a steel plant on the coast that could in time attract other industries, create new jobs, begin to reconvert the old industrial port system severely weakened by the loss of colonial markets and ultimately support the competition announced with the major EEC ports. This ambitious project became reality when the State took it over and the Délégation interministérielle à l’aménagement du territoire et à l’attractivité régionale (DATAR—Interministerial Delegation of Land Planning and Regional Attractiveness) decided to create an urban and industrial hub on the edges of the Mediterranean capable of competing with other major Northern European hubs such as Rotterdam. The 5th and 6th Plans (1966-1975) provided

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23 The first three refineries were built in the 1930s at Berre, Lavéra and La Mède. From 1938, the three refineries processed over 1.5 million tonnes of crude oil, some 25% of total French imports. In the same year, for the first time ever, more petroleum products were imported into Marseille (by volume) than oilseeds, cereals and sugars combined (Xavier Daumalin, Le patronat marseillais et la deuxième industrialisation, op. cit., p. 255).


26 “Aire Métropolitaine marseillaise: la quête de l’émancipation dans les politiques...
“Neither leave here, nor die here, but really live here”

for over 10 billion francs (1973) as an investment, funded 50% by the State and mainly set aside for installing steelmaking in the industrial port zone of Fos. Wendel-Sidelor, Usinor and Thyssen thus set about constructing a steel plant—the Société lorraine et méridionale de laminage continu (SOLMER)—which was both the culmination of all these years of effort and was universally considered to mark the revival of Marseille as an industrial port. The plan was to develop over 20,000 hectares. Initially 1,500, then 7,000 hectares unforestied grassland, salt meadows, marsh, lakes and coast between Fos-sur-Mer and Port-Saint-Louis du Rhône were needed to accommodate the petrochemical (Esso, DPF), steel (Solmer, Ugine aciers), energy (EDF, GDF, Air Liquide) and freight sectors. Docks were dug for tankers and container ships. Housing projects were launched at the same time in twenty-four adjacent municipalities to house the influx of population attracted by the job creation forecasts. The State proposed grouping the municipalities and creating new ones to offset the technical and financial difficulties that were delaying the developments. Cracks appeared in the relations with the local elected officials. The largest companies were however also investing in building housing units or setting up collective infrastructures for their personnel.

A huge industrial and urban site thus saw the light of day which dramatically altered both local societies and landscapes. For instance, 2,869 inhabitants lived in Fos-sur-Mer in 1968 before the industrial developments. According to the census, they were 6,709 in 1975. This rapid growth carried on fastly till the 2000’s. Nearby municipalities experienced the same changes but at a lower or more erratic pace, e.g. Port-de-Bouc or Martigues.

Figure 2. Fos-sur-Mer

© Christelle Gramaglia

The move to ban fishing in the Etang-de-Berre

This forced march towards industrialisation was highly criticised, especially by the ecologists. The Marseille branch of the Survivre et Vivre (Survive and Live) group published a brochure on Fos in the early 1970s. It denounced “industrial occupation”, “growth of a monster”, “tragic gamble”, “the antagonistic model that sets industrial expansion against quality of life”, “a challenge of expansion that defies reason, life and human values” and “a final rupture of the ecological equilibrium in the Bouches-du-Rhône” 27. It highlighted extended pollution in the Crau, Camargue, Alpilles, Sainte-Baume and the Luberon and predicted awakening regionalism “at zero-day in Fos”. Factories in the Chenal de Caronte and around the Etang de Berre were also a source of risks that seriously threatened humans and the environment. Four people died in an explosion at Naphtachimie in 1954 and part of the La Mède refinery caught fire in 1956, causing one death and multiple injuries and sparking anguish among local residents. In 1958, a major disaster was narrowly averted when an accidental oil spill on the water at the Port of Lavéra caught fire, producing huge flames. And local people were visibly worried whenever LPG carriers and tankers loaded with flammable substances passed through the Chenal de Caronte. Not only were they a source of oil-related industrial risks, all these industries were also highly polluting. They were hazardous to the health of workers and local residents and polluting discharges undermined other activities like salt manufacturing and fishing. The Martigues fishermen’s cooperative stepped up its protests and legal action, receiving occasional financial compensation, but did not succeed in putting significant pressure on the public authorities and industrialists to obtain pollution-reducing actions. Above all, it became increasingly clear to everyone involved—fishermen, industrialists and the authorities—that radical action was needed. It was time to choose between fishing and oil. On 12 February 1957, the Marseille Chamber of Commerce and leaders of the Martigues fishermen’s cooperative signed an agreement whereby the chamber agreed to pay 450 million francs, to be distributed among practising fishermen, once a law banning fishing on the Etang de Berre was passed. The agreement stated that the chamber would pay a further 25 million francs by way of compensation for the pension shortfall that the fishing ban would cause. 28 The agreement entered into force on August 7th 1957 when the law passed. Industry had won the power struggle 29.

27 Published in Survivre… et Vivre, no. 12, June 1972, p. 19-23.
28 Initially, the Marseille Chamber of Commerce was supposed to take out a loan to cover the financial settlement. When the chamber failed to secure authorisation to borrow the money, the oil companies loaned it instead, to be repaid by annual tax relief on the special tolls they had agreed to pay on crude oil landed at the port.
29 Paul Allard, “L’évolution de la perception des pollutions et des risques industriels du
Surge in pollution

The initial criticisms and opposition at Fos-sur-Mer focused on the delay in the urban developments, but nuisances and pollution rapidly became a social and political issue. In his 1971 letter to the centrist Mayor of Fos-sur-Mer, Mr Féraud, the director of the Mission d’aménagement de l’étang de Berre (MAEB—Etang de Berre development mission), wrote that the industrial sites were too close, contesting the limits which were to be imposed on the development of the municipality. The environmental discharge forecasts were alarming—an estimated 800 to 900 tonnes of sulphur dioxide (SO₂) would be emitted into the atmosphere by 1975, “thereby enabling an oxidising “smog” or corrosive fog to form”\(^{30}\). The town mayor tried strong arm tactics against the authorities based on the effective advice of a public relations expert during an electoral campaign. The idea was to achieve anti-pollution measures for residents and the planning permissions that he strongly desired at a single stroke. He also planned to introduce his own monitoring operations of atmospheric pollution with the tax revenue of the town. He founded the Association fosséenne pour l’étude des nuisances et la protection de la santé (or Fos-Vie nouvelle) that acquired its own instrument for measuring sulphur in the air. This increased the pressure on State departments and industrialists. An inter-communal anti-pollution group was even set up for a while (Figure 3): “With the decision by the Mayor of Fos to combat pollution, the authorities are facing an unexpected situation. They are summoned publicly to explain their policy on the matter and are above all accused of having denied the existence of a problem that appeared suddenly, after the elections [of 1971], on a disastrous day”\(^{31}\). Others also put forward demands, including the militant Gabriel Laforest, Deputy to the Communist Mayor of Port-de-Bouc and a marine engineer, who condemned the damage inflicted on the La Crau water table, the Etang de Berre and the Gulf of Fos. He was supported by the communist mayors in the region, but also benefited from his contacts with the left-thinking ecologist and regionalist movements.

These converging yet separate movements showed the lack of environmental

\(^{30}\) The majority of the historical data is, for the 1970s, drawn from the work by Paillard (Bernard), La Damnation de Fos, Paris, Seuil, 1981, p. 122. The development of the Fos-sur-Mer industrial port zone and its demographic and economic impacts gave rise to a comprehensive collective survey, in which this pioneering work features.

\(^{31}\) Idem, p. 123.
data prior to the industrial port zone construction project\textsuperscript{32}. They echoed the growing displeasure of residents in deep-seated, dramatic changes. The newly-formed Ministry of the Environment was pressurised into releasing special funds to finance a first batch of studies. The result was a White Paper sent to the municipalities in question by the Prefect in 1972. As soon as he was appointed first Minister of the Environment, Robert Poujade, sent a general mining engineer, Bernard Schnell, to investigate the situation. The Minister wanted to make an example of Fos-sur-Mer. A programme of actions for the entire Fos-Etang de Berre zone was sketched out, including creating a \textit{Secrétariat permanent pour les problèmes de pollution industrielle} (SPPPI–Permanent Secretariat for industrial pollution problems\textsuperscript{33}, a ground-breaking idea to boost coordination between State departments and discussions with industrialists on the topic, defining air and water quality standards, even provisionally, and introducing a monitoring and warning system (focused mainly on $\text{SO}_2$) with the \textit{Association des industriels de Fos-étang de Berre pour l’étude et la prévention de la pollution} (AIRFOBEP–Association of industrialists of Fos-Etang de Berre for the study and prevention of pollution, by now organized in a national network and called ATMOSUD)\textsuperscript{34}.

Pollution became a subject of collective concern and was referred to the municipal authorities near the industrial port zone. This created a variety of circumstances that converged local or national policy strategy and militant commitments. The denunciation of harmful effects of industry on environment and health was all the more effective as it pinpointed shortcomings and negligence. The new Ministry of Environment was thus able to lay down the framework for its future policy in classified installations and authorities could confirm their powers and prerogatives in the field, despite rivalries between newly-created local services in charge of regulating industrial activities or environmental monitoring\textsuperscript{35}.

Progress was nevertheless made in regulating emissions into the atmosphere and discharges into water. Sudden decisions were made at the same time that sometimes contradicted the stated goals. Thus, in 1973, the Prefect announced

\textsuperscript{32} Bernard Paillard refers to a single report dating from 1969, in addition to the public consultation processes which could have helped to foresee potential problems. He wrote that this would have prompted a strategic withdrawal by the PAM, making the industrialists alone responsible for dealing with emissions and discharges, \textit{(ibidem)}.

\textsuperscript{33} See Xavier Daumalins\’ article in this issue.

\textsuperscript{34} Remember that all this took place before the 1976 environment law and the 1977 classified installations law that together defined a regulatory framework based on thresholds and self-monitoring. See the article by Xavier Daumalins in this issue for further detail on how this was created.

\textsuperscript{35} We are thinking especially of the anti-pollution cell created in 1972 within the Public Works Department but which took some time to gain a foothold due to lack of human, material and regulatory resources, as confirmed by a witness of that era.
his intention of declaring the Gulf of Fos insanitary (following a SOLMER factory request to reject ammonia water from its coke plant into the bay.) Gabriel Laforest founded the Association pour la protection de la Méditerranée Ouest (APMO–Association for the protection of the Western Mediterranean) and called for a port blockade. The State once more intervened to settle the conflict. A compromise was found and the SOLMER directors, Wendel-Sidélor, agreed to develop filtration techniques, given time. Other initiatives came to light and frustrated major projects, including the proposed nuclear power plant at Ponteau.

Figure 3. Forecasts for the Fos industrial port zone in 1985

The manadiers of the Association de Maintenance du Pays de Crau (Association for the maintenance of bull breeding and games in the Crau area, joined by many local officials, also opposed further loss of land to the industry while there were still plans to extend the industrial port facilities more widely towards Arles 36. This is the case of, Vincent Porelli, the communist Mayor of Port-Saint-Louis du Rhône, who decided to classify neighbouring land as agricultural, to place geographical boundaries on industrialisation that nevertheless had his support, as he explained to us when interviewed. Also at the same time, a play, La pastorale de Fos was performed at the Avignon Festival by Carriera, the Occitan popular theatre group37. Featuring the Tarasque, a mythical monster, it evoked the social and environmental traumas of building the Fos industrial port zone at the very moment that the Trente pollueuses (Polluting Thirty) were ending38. It raised the question of the troubled and uncertain future of this area based on clear regionalist concerns.

CHANGE AND INDUSTRIAL DIVERSIFICATION UNDER ENERGY SPIKES AND GLOBALISATION

The brakes were put on industrial development in the industrial port zone between 1975 and 2010 and it never reached its planned size (10,000 ha approximately were actually developed rather unequally). The number of jobs hit the ceiling at 20,000, representing about 20% of the total workforce in adjacent municipalities. The oil crises followed by the steel crisis quickly halted new building projects. Environmental and health concerns gave way to uncertainties caused by the threat of unemployment. In addition, clear progress in combating industrial nuisances and pollution made them less pressing (for example, the SPPPI reported some 90% reduction in hydrocarbon, phenol and mercury discharges into the water, whilst SO₂ emissions into the air were halved between 1972-73 and 198339, but “having dealt with the urgency of the disaster, it fell asleep” as reported to us by one of its former coordinators). These questions were little by little erased from the public domain40. They were no longer addressed outside

36 See the details of their arguments in “La Camargue ‘rive-gauche’ dans les fumées de Fos”, Le Monde, August the 8th, 1977.
37 Claude Alranq, La Pastorale de Fos: théâtre (Lo Teatro de la Carrièra), Martigues, P.J. Oswald, 1975.
38 Christophe Bonneuil and Stéphane Frioux, idem.
39 Scientists at the Marseille marine hydrobiology laboratory nevertheless noted in 1978 that the Gulf of Fos probably had the largest concentration of heavy metal pollution in Europe, see Benon et al., “Distribution of some heavy metals in the Gulf of Fos”, Marine Pollution Bulletin, 1978, vol. 9, no. 3, p. 71-75.
40 The expression is borrowed from Thomas Le Roux, “L’effacement du corps de l’ouvrier.
their technical and administrative management bodies until 2000, when two new projects made residents angry, especially the Fos-sur-Mer and Port-Saint-Louis du Rhône projects.

**Renewed environmental criticism**

Two major projects set things off and shattered the relative silence prevalent until then, evoking the breaking of the “social pact” or “territorial compromise”\(^1\) formed between the PAM, industrialists and local residents in the industrial port zone, mainly due to significant direct economic fallout via the business tax. Failing inter-party agreement, individual and collective benefit/detriment ratios, although rarely clarified, explained a certain acceptance and resignation. However, new game-changing events were on the horizon. In 2002, PAM and Gaz de France announced their intention of building a methane terminal to replace the lido du Cavaou, a highly popular beach with Fos-sur-Mer residents. No public debate was planned. Even the local elected officials only became aware of the proposal slightly before the start of the public enquiry, right in the middle of an electoral campaign. The *Association de défense et protection du littoral du Golfe de Fos* (ADPLGF—Association for the defence and protection of the Gulf of Fos coastline) was thus founded to contest the location of this terminal and denounce the increased risks for Fos residents and users of the site. A popular consultation returned a massive rejection of the project. Despite the negative opinions expressed in both the public survey records and municipal council deliberations, as well as several submissions by ADPLGF and the Ouest Provence community of municipalities to the administrative court, construction of the Cavaou methane terminal commenced in 2004. The opponents managed however to obtain concessions in exchange for dropping the lawsuit. A section of the beach was leased to them and GDF agreed to share the newly-constructed industrial crane with the fire department services. Another simultaneous project fanned the anger of residents. Also in 2002, the idea to install in Fos the incinerator that could not be built in Marseille North was mooted after some campaigning. La Communauté Urbaine de Marseille (CUM—Urban Community of Marseille) was looking for a waste disposal site to replace the Entressen household refuse dump site earmarked for legal closure and already delayed. The PAM was prepared to transfer land in the Fos industrial port zone, an announcement that was immediately met with strong protests. Opponents

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to the plan in Fos-sur-Mer and Port-Saint-Louis du Rhône, where first housing units were about 2.5 km from the site, joined forces. They ramped up efforts to condemn the potential health risks from this new facility could generate in addition to the already existing ones. They referred to the proven hazardous nature of facilities of the kind like the incinerator at Gilly-sur-Isère in Savoie that was suspected of extensive dioxin contamination. An anti-incineration action group was formed. A regional and even national association network was set up to counter the project with the support of various militant groups. Consultations, petitions, demonstrations and legal cases followed in succession. Opponents and their mainly socialist local elected officials, including the local council of the Bouches-du-Rhône, strategically joined forces against what they viewed as interference by the right-led CUM in their area. Nothing made any difference, neither the environmental arguments nor the health arguments. In 2005, the public enquiry commission handed down a favourable opinion. The incinerator project ultimately was completed successfully, despite work being paused momentarily in 2006 following a legal decision and a change in the CUM majority. Early 2010, the industrialist Evéré started operations, much to the distress of the inhabitants.

Other projects, in particular extending the PAM to Grand Port Maritime de Marseille (GPMM) in 2008, marked a gradual return towards the freight and energy activities. They comprised several phases in the basins—Fos Faster (new methane terminal) and Fos Tonkin (development of container terminals and logistics zone with a river link opened up between Dock 3 and the Canal of the Rhône to Fos. These perspectives worried residents as the last protected areas of the agri-environmental crown that encircles the industrial-port area, seen as a “buffer zone” and a “green lung” to the north since the 1970’s, could be lost. Consultations were well organised this time round, but the accumulated resentment of elected officials and associations was detrimental to discussions. Reversal in the economic conditions forced the Fos Faster project to be abandoned in 2015. Nevertheless, public debates provided the opportunity to raise environmental health concerns.

42 For this incinerator in particular, see Elivre Van Staavel, La Pollution sauvage, Paris, PUF, 2006.
Requests for knowledge on the health impacts of pollution

The Fos industrial port zone today counts fourteen Seveso high threshold\footnote{This qualification refers to the European Directive and French law that make it compulsory for plants that house dangerous substances to report to the public authorities. There are two thresholds: plants implying high or major risks.} petrochemical and metallurgical plants (Esso, Arcelor Mittal and others), a methane terminal and two incinerators (an older one for industrial waste and the Evéré incinerator). All this is in addition to the freight facilities. It has one of the largest concentrations of at-risk installations in Europe—set up in a densely populated area, the Marseille metropolis hosting about 1.8 millions inhabitants according to the 2016 census. The extensive demonstrations after the announcement of the industrial renewal in the 2000s may not have prevented the disputed projects from reaching completion but they did at last bring the potential environmental and health impacts of accumulated pollution into the public eye. We heard these demands repeated many times during interviews. They were a common thread in comments by association representatives during meetings and were confirmed by other research\footnote{See Tobias Girard, Les Pouvoirs du danger: zone industrielle de Fos-sur-Mer: anthropologie politique des risques industriels et du conflit de l’incinérateur, EHESS Paris, Thesis in social anthropology and ethnology, 2012; Isabelle Hajek, “Traitement des déchets et santé environnementale: la science, un facteur d’acceptabilité locale? L’exemple de l’incinérateur à Fos-sur-Mer”, Développement durable et territoires [online], vol. 4, no. 2, July 2013, uploaded on 16 July 2013, consulted on 23 September 2016. URL: [http://developpementdurable.revues.org/9760]; Clara Osadtchy, Conflits environnementaux en territoire industriel: réappropriation territoriale et émergence d’une justice environnementale: le cas de l’étang de Berre et de Fos-sur-Mer, Le Mans. PhD thesis in social and regional geography, 2015.}.

The public enquiry into the Evéré incinerator, in keeping with the numerous demands by associations and local elected officials, recommended an inventory before the facility entered into service. In 2007, the Ouest Provence community of municipalities ordered a “zero point” from the \textit{Bureau de recherche géologique et minière} (BRGM—Mining and Geological Research Bureau) in an attempt to determine the accumulated effects of industrial discharges over time and also to monitor the impact of the new, disputed facility. Discussions also revolved around developing a decision-making tool for elected officials seeking to retake control of issues that stalled their development projects and which in the main eluded them through lack of technical know-how. Air, water and soil samples taken over the entire industrial port zone, except for industrial sites, were analysed, with the results published two years later. They identified exceedances of standards (fine particle emissions in the air) and a few limited “hot spots” (soil and water pollution). The report recommended regular monitoring and introduction of
appropriate management plans. It was, however, controversial and the study protocol was criticised. Incinerator opponents demanded more precise data. The ADPLGF and the Collectif santé environnement de Port-Saint-Louis (CCSE—Health and Environment Action Group of Port-Saint-Louis), a knock-on from the Anti-incineration action group, petitioned the European Parliament Committee on Petitions two years apart to condemn the increased pollution caused by the incinerator. They claimed that they wished to “neither leave here, nor die here, but really live here [in the towns near the industrial port zone which should not be “overpolluted”]”. The Committee on Petitions arranged a fact-finding mission on the ground in 2008. It cast no doubt over the facility in question, but concluded its report with recommendations for the study and epidemiological monitoring of local residents in line with the opponents (in addition to incitements to reduce emissions)\(^{46}\). Faced with an increasingly blatant lack of public information on health issues, the associations in Fos and Port-Saint-Louis decided to occupy the premises of the Regional Health Directorate (DRASS at the time). They obtained none of the information requested and were removed by law enforcement officers, but a few months later the DRASS announced the launch a series of health studies, starting with hospitalisation data\(^{47}\). The Ouest Provence elected officials were in the meantime pressurised into agreeing to finance an independent body responsible for producing new knowledge, The Institut écocitoyen pour la connaissance des pollutions (IECP, Ecocitizen Institute for knowledge of pollution) was created in 2011. It was tasked with expanding knowledge on the chronic effects of industrial activities by going beyond the regulatory thresholds. Following questions and claims raised by residents and activists, some having become its members, the IECP launched several bioindication experiments, including some participative ones\(^{48}\). A survey on the impregnation of the Fos-sur-Mer

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47 Clara Osadtchy lists the seven main health studies in the Fos-Berre region for the 1989-2011 period that pinpointed excessive pollution-related cardiac and haematological pathologies. See also Stéphan Castel, Pierrick Cezanne-Bert, “Des questions sanitaires sans réponse aux problématiques publiques de santé-environnement”, *op. cit.*, p. 79-114. An assessment of the regulatory state of environments and health risks was added to these, conducted in 2005 and 2008. However, the decision to deal separately with the impacts of accumulated emissions or effluents produced in Fos-sur-Mer and on the neighbouring site of Lavera was widely criticised.

“Neither leave here, nor die here, but really live here”

residents was also organized. This independent body favours a twofold action plan—on both a scientific and political level—requiring the authorities to broaden their anti-pollution initiatives based on the knowledge produced, in order that environmental and health impacts of industrial activities can at last be monitored precisely.⁴⁹

Today, the demonstrations have dropped off, but the resentment remains. Other associations like France Nature Environnement (FNE—a regional and local federation of environmental associations) or Nature, citoyenneté en Crau et Camargue (NACCICA) keep a close eye on announcements for new industrial projects likely to have an adverse effect on the environment. In 2012, FNE took Arcelor Mittal to court over perceived repeated regulatory infringements, based on data from the Direction régionale de l’environnement et l’aménagement (DREAL, Environment and Development Regional Directorate). The criminal court judge convicted Arcelor Mittal of water pollution one year later. The same thing happened in 2018, with the same result.⁵⁰ Following these successes, in 2018 and 2019, the ADPLG filed a criminal complaint for endangering the lives of others and another before the administrative courts.⁵¹ This class-action, still in progress, aims at denouncing the consequences of cumulative pollution and the negligence of the State. After more than a decade of mobilization as well as public debate in dedicated arenas, severe doubts have been cast over the authorities’ ability to curb risks. Confidence in ordinary regulatory practices has then dropped.

CONCLUSION

Since the early 19th century, the section of coastline between Fos and the banks of the Etang de Berre has been regularly invaded by industrial growth. Productive activities and transport have gradually gained a foothold but at a cost—the upheaval of the socio-economic, environmental and health situation that sparked resistance and disputes, despite the jobs created and an advantageous compensatory practices. The historical perspective of these one-off and recurring confrontations highlights a number of observations on the changes and common features of this enduring balance of power. Although the legal and institutional framework has notably

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⁴⁹ The IECP’s main contribution was to pinpoint the limitations of the industrialists’ self-monitoring, restricted to the perimeter of their factories alone, and also the shortfall in regulatory monitoring by AIRPACA that failed to target ultrafine particles and certain specific chemical compounds found extensively in and around the industrial port zone.

⁵⁰ “À Fos-sur-Mer, ArcelorMittal accusé d’atteinte grave à l’environnement et à la santé”, Le Monde, December the 17th 2018.

⁵¹ “La pollution mobilise à Fos: un an après, les plaintes s’enchaînent”, La Provence, October the 14th 2019.
evolved over time, the forms and arguments of demonstrations have partially remained the same, with regionalist support and references, both right and left, that deserve to be recorded. Admittedly, the public authorities and the industrialists are governed by far more stringent legal obligations than previously, local residents have far more of a voice, public opinion carries more weight and riots are a thing of the past. Nevertheless, clashes can still be very lively, as in 2005 during the anti-incinerator demonstration in front of Marseille City Hall or during the evacuation of the DRASS by the police. The municipalities neighbouring the Fos industrial port zone and the Fos/Etang de Berre region are still under tremendous stress. The resentment of local residents fiercely attached to their region continues to be fuelled by the accumulation of pollution, and spatial, environmental and health dispossession of the past. The State departments, elected officials, developers and industrialists always seem virtually incapable of anticipating problems beyond the regulatory provisions alone that they know to be inadequate and riddled with holes. Despite clear progress in consultations, the creation of specialised information arenas under the authority of the Prefect (“site monitoring committees” since 2012, after the “local information and consultation committees” and “local information and monitoring committees”) or under the auspices of the SPPPI, the amount of credence lent to the anxieties of local people remains highly uncertain. And just like in the 19th century, concessions can ultimately only be snatched by recourse to justice and forging an extrajudicial balance of power: the first industrial discharge reduction and monitoring measures in the 1970s, the reopening in the Etang de Berre to fishing in 1994, access to the beach at Cavaou, the creation of an original scientific body—the IEP— to try and improve knowledge on the effects of accumulated pollution on the environment and health and the suspension river linking projects in the Etang de Caban. The region of Fos-sur-Mer and the Etang de Berre has been the stage both for successive fights against the adverse impacts of industrialisation, demonstrating the resistance of its local residents, but also an area for scientific, technical and political innovation to respond to this, proving that the authorities and economic leaders can, when they so wish, act effectively. The region nevertheless remains vulnerable to pollution, so are its people as shown, by INDEX, the epidemiological study conducted by the IEP. Fos-sur-Mer residents are likely to have a higher impregnation of lead, benzine and furans. Especially when they eat locally sourced seafood, homegrown and homebred species. Problems of toxic discharges take long to be dealt with. For example, one plant had been granted an exceptional derogation allowing it to release mercury into the Gulf of Fos, with consequences on marine life that could be measured. It was not until

52 See the article by Christelle Gramaglia and Émilie Duchêne in this issue.
2018 that the processes changed and it stopped. The consequences of other sources of pollution remain unsuffciently monitored. In addition, despite job offers and direct and indirect economic fallout from industry, the “social pact” or “territorial compromise” already evoked and renewed under a variety of conditions at different times, remains fragile and even uncertain. At a time when a redistribution of industrial tax revenues is under discussion for the Marseille Provence Metropolitan area, a resurgence of tensions can be noticed\(^{54}\).