

Industry and environment: the example of Sfax in Tunisia



Sfax, “the capital of the South,” has experienced a continuous decline since the 1980s, with multiple causes: globalization, the flight of economic and cultural elites to the capital or abroad, transition to a service-based economy... but one of the determining causes is the deterioration of the quality of life due to industrial pollution – especially chemical – despite citizen mobilization since 1980 and especially after the 2011 revolution.

Sociologist and environmental activist from Sfax, Fethi Rekik analyzes this exemplary case with the perspective of a scientist and testifies to this challenging struggle with the commitment of a citizen, in a dialogue with Bernard Mossé, historian, Research, Education and Training Manager of the NEEDE Mediterranean association.

[Bernard Mossé: Fethi, can you present your research on one hand and your commitment on the other hand, and how these two activities intersected in your career?](#)

Fethi Rekik: Indeed, my journey consists of two aspects, scientific and associative, which I have actually pursued in parallel.

In 2002, I joined the Association for the Protection of Nature and the Environment of Sfax (APNES). At the same time, I was a sociology professor at the Faculty of Arts and Humanities of Sfax. There was a collaboration between this nature conservation association and the faculty. It was a plan to protect the biodiversity of the Kneiss Islands, a group of four islets classified as PIM (Small Islands of the Mediterranean) with exceptional flora and fauna threatened by poaching, clam pickers, and pastoral activities (sheep). This project was funded by the GEF (Global Environment Facility); it

was an opportunity for me to work on the socio-economic aspect of the project and to write an article published in 2006 in the CERES journal.

Later, I continued research and published an article with Salem DAHECH (Professor of Geography at Paris VII) on road traffic and pollution in Sfax in the journal *Pollution atmosphérique*: how to explain that city dwellers contribute to pollution, especially noise pollution, in their city of Sfax; my colleague focusing on environmental aspects and myself on the psychosociological aspects of the issue.

More generally, my research topics focus on the role of Sfax in the country, centralization and regionalization, and more broadly the development model.

Until 2011, the APNES, where I was actively involved until 2011, was the only one acting in the region of Sfax. Its founding president (the late Ahmed Zghal) was a prominent figure of the ruling party, the RCD. Left-wing party activists, with a few exceptions, did not want to participate in the association, considering it ineffective, but often attended events (such as annual seminars) addressing environmental issues in Sfax, particularly the pollution caused by chemical companies: SIAPE (Industrial Company of Phosphoric Acid and Fertilizers) and NPK (nitrogen, phosphorus, and potassium). The association also carries out educational activities by leading high school clubs in the Sfax region to raise awareness and educate students about environmental protection.

[Bernard Mossé: What is happening with the 2011 revolution?](#)

From this point of view, there is a before and an after 2011 as well.

With the acquisition of freedom of speech, many citizen movements have emerged, including on environmental issues. And these citizen movements have surpassed APNES, the historical association.

A collective was then formed, composed of associative actors including those from APNES, former politicians, and young people.

That year marked a turning point: just after the revolution, APNES wanted to materialize the decision made in 2008 by former President Ben Ali to close SIAP. The association organized a seminar with this objective. I was personally going to participate in this activity that did not take place. It faced strong opposition from the UGTT union, or rather its branch in Sfax, which opposed the closure of SIAPE (which was supposed to take effect in 2011 by virtue of the decision made by President Ben Ali in 2008) and the layoff of around 300 employees, in collusion with the central government.

Usually, the UGTT stands on the side of humanitarian causes – it will even receive the Nobel Peace Prize in 2015 for this, awarded to a collective of which it is a part, along with the League for the Defense of Human Rights, the Order of Lawyers, and the employers' organization UTICA. But not this time and not in Sfax.

There is therefore a great inertia that paralyzes this cause for several years.

But starting from 2014, there is a revival of the movement, with large demonstrations (starting from January 2015), sit-ins lasting through the nights in front of SIAPE (2016), then other demonstrations follow in 2016 and 2017.

During the 2019 electoral campaign, the head of the government at the time and one of the future presidential candidates spoke in favor of the official closure of the chemical plant. However, so far, there is no decontamination project or redevelopment plan for the site. Another battle begins that involves the quality of life of the residents but also the economic attractiveness of the city.

#2 Sfax: an industrial region in decline

Bernard Mossé: Sfax holds a special place in the economic history of Tunisia. Can you tell us a word about this context, to better understand the industrial and environmental issue in Sfax that you have just described?

Fethi Rekik: The general idea is that in the 1960s and 1970s, as part of the national economy, there was already an entrepreneurial culture in Sfax. We can refer to the analyses of several specialists, particularly the geographer Ali Bennis, who characterizes Sfax as a regional city involved in a process of urbanization. As the second economic center of the country, after Tunis, Sfax has always had a complex relationship with the central government. Despite being marked by its entrepreneurial culture, it has nevertheless developed in several areas:

The agri-food sector, with the company Poulina (PHG) established throughout the country, with subsidiaries in Morocco and in other countries as well;

in the field of olive growing: even though the olive tree is everywhere in Tunisia, Sfax still holds 1/3 of the country's production today, mainly in oil, which is significant;

Despite a semi-arid climate, it is a region known for cattle farming, particularly dairy production;

and of course the chemical industry: SIAPE (Industrial Company of Phosphoric Acid and Fertilizers) and NPK (nitrogen, phosphorus, and potassium).

But at the end of the 1970s, the first effects of globalization occurred, with the country opening up to foreign production, especially the importation of products from Asia, via Libya, in the textile and clothing industry, with its informal market leading to many bankruptcies, even though some companies manage to survive. However, it is not the same weight as before.

Especially, we are transitioning from the industrial era to the service era, which requires better infrastructure. The private service sector focuses where there is access to the sea, of course, but also better living conditions. From this point on, as explained by a Tunisian geographer, 80% to 90% of private investments are concentrated in what is called the "competitive triangle," or the "useful triangle," which includes Tunis, Nabeul, and Cap Bon, and extends down to Sousse. It excludes the region of Sfax, further south, and all of the Tunisian Sahel. Sfax is actually penalized by the damages of the chemical industry: a large part of the Sfax economic elite has moved to Tunis where they form a diaspora. For example, they settle in El Ennasr, an upscale neighborhood in Tunis. You

see, we discovered this community in a football match final in 1994, between CS Sfax and Esperance de Tunis...

Bernard Mossé: it's an old rivalry between these two clubs...

Fethi Rekik: Yes. But what is surprising is that the weight of the population of Sfax was discovered in Tunis. This is where it was discovered that there is a large and significant community, because it is the economic elite. And not only economic, but the cultural elite as well. There are Sfaxians in Tunis today who are not economic actors. They are, for example, lawyers, judges... Doctors are moving to Tunis because the numerous Libyan clientele who used to come to the polyclinics in Sfax, a very, very prosperous sector, during the 1980s-90s, now travel directly to Tunis by plane. This is why even the best doctors go to Tunis. The era of service requires a clean and unpolluted living environment that Sfax does not offer. It is thus losing its vital forces. In terms of migration, it is certainly still in surplus due to populations arriving from the interior regions, from Sidi Bouzid, Kairouan, or Gafsa... This numerically compensates for the departures. But the difference is that these are people with little or no qualifications, whereas those who leave are the economic and intellectual elites.

Bernard Mossé: So, can we date this decline to the 1980s?

Fethi Rekik: Yes, the decline of Sfax began in the early 1980s with globalization, the flexibility of employment accompanied by the new Labor Code, the development of subcontracting... Sfax specializes in low-skilled industries with low added value, such as textiles that employ women with low qualifications. The best industries are relocating to Tunis... According to the geographer Ali Bennis, the governorate of Sfax, known as the "capital of the South," considered in theory as the country's second economic hub, is actually today the 5th region in the country: it may have even recently dropped to the 7th place. Sfax remains the second largest city in terms of population in the country, just behind Tunis, but it is ranked 5th in terms of development and attractiveness indicators.

An example: since the 1990s, the leaders of the major football clubs have been prominent businessmen, industrialists. Out of the last ten presidents of CS Sfax, only one resides in Sfax; the others live in Tunis... they have their businesses in Tunis. There is even a Sfaxian who is a leader... of Espérance de Tunis. They invest in Gammarth, in La Marsa, in the suburbs of Tunis, but not next to the SIAPE affected by pollution... Thus, as Ali Bennis writes, "delays in the development and upgrading of its economic fabric are compounded by serious environmental problems... These obstacles present a major hindrance to the metropolization and internationalization of the city."

3 Sfax: the economic and environmental damage of industrial pollution

Bernard Mossé: What are the obstacles to implementing a policy that would give new momentum to the city of Sfax?

Fethi Rekik: First, there is a difficult relationship with the state, and for a long time. Sfax has not generated national-level policies, unlike the Sahel region or, of course, the

capital. The development model has always been oriented towards these regions, since Independence, government policy has genuinely gone in this direction. Politicians and researchers justify this by historical factors and sometimes even natural handicaps, but it often came at the cost of denying the natural and cultural wealth of the inland regions. The fall of the former regime[1] is largely an expression of the feeling of *hogra* (contempt) and economic and political marginalization, which is very important. Geographically, the governorate of Sfax does not belong to these regions, politically it does, at least that is what emerges from the arguments of its active economic and cultural elite in civil society and/or engaged in political parties or even more from the writings of these academics[2].

Bernard Mossé: Isn't there also a responsibility of the Sfaxiens themselves in these obstacles?

Fethi Rekik: Capital has no feelings. Sfaxiens businessmen, like all other businessmen, settle where their interests lie. And this is even more true in the era of the *new spirit of capitalism* that venerates mobility as both an end and a means.

Bernard Mossé: Are you referring to the book by Luc Boltanski and Eve Chiapello, to the critique of capitalism through "projects" involving flexibility, mobility, and adaptation?

Fethi Rekik: Yes, of course. But it is not a critique; it is rather a characteristic. I already told you about this president of the Sfax football club who, through his son, does business in Tunis and even belongs to the rival club, Espérance de Tunis... capital invests in Tunis or in the Northeast of Tunisia, but not in Sfax, which is a polluted site.

This explains why the coastal development project, Taparura, on the northern side of Sfax, for which the development plan was created, I would say, more than ten years ago, has not found an investor. This is a project that resembles the major redevelopment projects along the shores of Lake Tunis, Lac 1 and Lac 2. The state has a responsibility. But there is also the site, with an environment that is not clean. So, the site of Sfax South needs to be decontaminated (the SIAPE being closed, but its damage still remains). Without decontaminating this site, who would agree to invest in Taparura?

Bernard Mossé: This is indeed about creating a tourist area?

Fethi Rekik: Not just that. The Taparura project includes hotels but also a large sports complex, cinemas, a cultural center, a seaside promenade for the citizens, it is practically a city...

So it is not solely the fault of the Sfaxiens, because until now there are no real prerogatives of a decentralized local power. Also, the UGTT union is accused of opposing the closure of the SIAPE, and then not supporting the idea of transforming its site into a clean economic development hub. It must be said, but this is not unique to Sfax, that some companies have moved to Morocco because there, there is no union. After the revolution, foreign entrepreneurs preferred to go elsewhere abroad, not only to escape unionism but because the conditions there are better and therefore attractive. And this particularly concerns Sfax.

Bernard Mossé: Can you now describe more precisely the consequences of industrial pollution in Sfax, particularly chemical pollution?

Fethi Rekik: Yes, of course. During the period when I was active in the APNES, in the 1990s and early 2000s, we produced tons of study papers. Academics from the faculty of sciences and doctors demonstrated the great harmfulness of factories on health; we established the link, for example, between the number of cases of serious illnesses and pollution. We even highlighted the radioactivity of phosphate extensively. And you know that there are spoil heaps, mountains of gypsum along the coast by the sea.

In the case of phosphogypsum left by the NPK, the Taparura development plan found a solution: we set up a sort of giant roundabout of 50 hectares, covered it and put grass, water.... It has become a green area... I don't know if you have seen this circle whose image appeared in the Taparura project of 420 hectares. We buried the mountain of gypsum in the project itself and covered it with plants. There you go, it has become a sort of park. Well, apparently, it is not harmful, for now!

To the south of the city, the mountains of phosphogypsum are still there and consequently, there is a huge problem for the environment, of course, because it is radioactive. From a health perspective, it is serious because it is often dumped into the sea. The entire area known as Sfax South is impacted over a radius of 15 to 20 kilometers. This region, around the Roman city of Thyna, is full of natural wealth that has been damaged by the phosphogypsum coming from all forms of waste from the SIAPE. And you can imagine the quality of the fish: we can no longer fish there, of course, even though we notice this summer that people are starting to swim there, but I am sure it will take time to evacuate the pollution from the surroundings of the SIAPE.

Bernard Mossé: Has civil society taken up the issue of decontamination?

Fethi Rekik: Yes, civil society has taken it up. We are demanding the decontamination of the SIAPE site. There are still and always reticences from the central power. It has no money and is not ready to decontaminate the site, taking the pretext that it is the property of the chemical group. As if the chemical group were not the property of the state! The state claims that it is enough to pursue industrial activities that are not polluting. Which remains to be verified...

So civil society is mobilizing on several issues:

- First, the "wetland". It is an extraordinary area to acquire and enhance within the framework of ecological tourism, very well known with migratory birds of different species: it is a RAMSAR site (a wetland of international importance with species to protect) and benefits from the commitment of the association Friends of Birds[3].
- A nearby park, dating back several decades, to maintain
- also salt flats to preserve but whose occupied area can be reduced.
- Above all, there is the project to transform the 210-hectare site into a sort of research and start-up center. The associations defend this project by advancing the argument that the University of Sfax is still among the top two in Tunisia, and its laboratories[4] are among the initiators of partnerships for

international research projects. Furthermore, the University has about twenty higher education institutions including the Faculty of Sciences, the Faculty of Medicine, engineering schools in biotechnology, telecommunications, computer science, multimedia... these are impressive places full of laboratories and constantly fed by high school graduates from all governorates of the country, particularly from Sfax, which has occupied the first rank for over half a century in terms of baccalaureate results at the national level.

The idea of this center is a conversion project that would allow, once the SIAPE site is decontaminated, to energize the region by engaging it on the path to a clean economy, and which would fit into a real metropolitan project. Unfortunately, this does not seem to be the path being taken.

[1] It is no coincidence that the inhabitants of the inland regions approve the President's decision to designate the date of the revolution as December 17, 2010 – the date of Mohamed Bouazizi's self-immolation in Sidi Bouzid – and not January 14, 2011, the day of Ben Ali's fall caused by the protests in the Capital.

[2] Taoufik Meghdiche, "the relations of Sfax with Southern Tunisia: some elements of reflection", Review of University Research, no. 8, 2010, pp. 41-61.

[3] On the website of this association, Sfax section, a publication dating from December 2012 can be read: 1st element of the ecotourism project for the Thyna Wetland:

"Eco-museum: To be preferably realized near the urban park, archaeological site, and Ain Fallet area but within the ZHT where the large gathering basins of birds are located: Pink Flamingos, Elegant Avocets, Little Egret, other herons, and large colonies of Black-headed Gulls. It would provide visitors with all information related to the birds of Thyna and allow close observations through fixed telescopes, as well as other services (refreshments, sandwiches, association office),"

[4] The University of Sfax has, in 2024, 110 research structures including 85 laboratories. It can be credited with 6 H2020 projects, 88 Erasmus+, 33 Erasmus 2+, 23 Tempus, etc.

4 The reconquest of industrial space

Bernard Mossé: What are the obstacles to this project of converting the polluted site by the chemical industrial group SIAPE in Sfax?

Fethi Rekik: It's expensive! Hence the idea of private investment, not just national, but open to foreign investors.

We will have to open up anyway. This aligns with the strategy that has been set by the municipality: to transform Sfax into a metropolis open to the world. Especially since the state has no money for that. Moreover, there are about ten projects that have never been realized: we have been talking about a sports city for 20 or 25 years, we talked about a stadium, a large stadium. Each time, it has been ratified by the ministry..., but nothing gets done. There is the metro project. There is also the Taparura project for the development of the waterfront...

Why not think about foreign investors to finance this kind of project? And this will generate activity. So that's the idea: to transform the SIAPE site into a clean economy. Especially since we already have one of the two major universities in the country.

Bernard Mossé: What can slow this down is the technical and budgetary management of the site's decontamination.

Fethi Rekik: No. How did they manage to create the projects of Lac 1 and 2 in Tunis? It was Saudi capital and other countries too! Why not do it in Sfax? They sold the square meter at a minimum. So why not do it here? So, it's always this kind of comparison. Why do they agree to do it for the capital and refuse it for Sfax? That's the idea. Maybe it should be divided by three compared to the Tunisian project; it's not considerable for a project of this size, with a credit set up under international cooperation.

Bernard Mossé: Yes, but investors are probably hindered by the fact that it is a polluted site.

Fethi Rekik: Yes, first, it needs to be decontaminated. Of course. We have the techniques for that. The problem is not technical. It is primarily a problem of governance and political will.

Bernard Mossé: You explained that civil society has taken up the subject. Has it restructured around this issue?

Fethi Rekik: After 2011, it is no longer the APNES that is the first actor, as I told you. Even if its members are still active, there are many youth associations, for example, that have taken over like the association "Sfax la Belle" which regularly organizes seminars. Another association is also very active: "Close SIAPE". It is made up of activists, but also academics and even businesses like "La Maison de l'expertise", with a leader who has contributed to revitalizing the movement.

And then, recently, we are witnessing the reconquest of one of the emblematic places of the Sfaxiens from the 1960s: the Casino square. During the colonial era, in the 1950s, there was a casino, a swimming club... those over 60 remember it. And they have reconquered it. I personally participated in this reconquest with the association "Casino" whose leader is a colleague from the university. The problem is that this space extends over a few hundred meters along the coast. To the south, there is the commercial port: that is a limit we can accept. But on the other side, there is another limit apparently imposed by the government: we authorized a company to settle there and as a result, we limited the extent of the beach to about 600 or 700 meters. And the company is now established.

Bernard Mossé: What is this company? Is it polluting as well?

Fethi Rekik: Setting aside the pollution, the question is why install it there, right in the city center, where the citizens are asking for the rehabilitation of the place, an emblematic spot of the city.

So civil society is asking for the extension of the beach and the right of the Sfaxiens to a beach since the rest of the coastline is polluted. And we do not understand why the government granted such authorization in this place...! But the association is active and

effective: there are restaurants, chairs to sit by the sea... And people frequent this beach. It is in a way a reconquest of this space by civil society.

5 Sfax in the regionalization project

Bernard Mossé: What is the state's attitude towards the situation in the region?

Fethi Rekik : You know that now the parties are in fact inactive although they exist by law. And then the experience of Sfax with political parties has always been a negative experience. My idea is that the development model of Tunisia since Independence has been based on a kind of privilege granted to the coastal region, in the northeast, including Nabeul and Sousse, and excluding the southern coast from Sousse. That is the main thing.

There are neglected interior regions like the Northwest. However, it is a region very rich in natural resources, favored by the climate. But these are regions said to be "handicapped" by natural conditions and therefore, little developed. And then there is tourism. Tourism is not only seaside tourism that is not profitable in my opinion. When we say that tourism brought in 6 billion dinars this year, it is not much compared to public investment. This is about as much as the income of Tunisians living abroad! Today there is a second Chamber.

The idea is not new, but it has just been relaunched and implemented by the President of the Republic, which consists of creating this second Chamber parallel to the parliament: the National Council of Governorates and Regions, which is composed of 4 or 5 governorates per region.

Sfax is part of the fourth region, including the governorate, also the governorate of Gafsa, which hosts the phosphate mining basin, those of Sidi Bouzid and Tozeur, known for their agricultural vocation (market gardening and arboriculture). The idea is interesting even if we do not see the relationship between these different governorates. The most important question would be: would the regions have a margin of autonomy in their own governance? Can we imagine, for example, a possibility of seeing a Region initiate a project in partnership with a foreign investor?

For the moment, the prerogatives of the Regions have not yet been defined, but according to some initial information, there is an egalitarianism regarding the presidency of the Region. For example, there will be no regional capital, but an alternation of the presidency between the different governorates throughout the mandate. If we are really going to address regional economic or health specificities, and explore opportunities for complementarity between the governorates, that could be a good thing.

It is an old request, but one that has never been implemented. Sometimes, it has only been formal. For example, before the revolution, the governorate of Sfax was placed, arbitrarily, in the same Region with those of Sousse, Mahdia and Monastir, all of which had a common tourist vocation...

But as a result, Sfax was harmed : being the second economic pole since independence, the governorate of Sfax was relegated to seventh place, according to development criteria, due to a lack of quality of life and attractiveness to investors, compared to two others in the same Region.

[Bernard Mossé: This privilege is not new.](#)

Fethi Rekik: Yes, Monastir was privileged under Bourguiba, his hometown. And Sousse is Ben Ali's hometown. The development model has remained the same and focused on low value-added sectors: clothing and especially seaside tourism, concentrated in the same governorates...

If we want to be competitive on a global scale, we will finally have to look at human resources: there are thousands of high-level Tunisian skills who have left in recent years for the United States, Europe or the Gulf countries, it is huge for a population like that of Tunisia, of which Sfax is one of the major providers of these skills.

And it is not only downstream of the training chain of these skills, for several years it is upstream: every year, there are thousands of high school graduates who leave Sfax for Germany to continue their studies and work there. If this continues it will be a big problem for Sfax but also for the whole country.

[Bernard Mossé: Are there other factors still working against Sfax?](#)

Fethi Rekik: Yes. There is another factor that weakens Sfax. To be competitive, to be a development hub, you need a road network that connects the city to other regions. There is of course the highway that goes from Tunis to Gabès via Cap Bon, Sousse and Sfax. The development of the country also needs cross-country roads connecting the main coastal cities with those in the West, but not only to the Capital.

But there is no highway from Sfax to the southwest, or a highway going to Libya, to the West towards Algeria. In Sfax, people and not only businessmen complain about the inactivity or the little activity of the airport and accuse the national company of bias: there is almost no traffic anymore, apart from a few flights to Libya and another provided by a foreign company. This is not significant for a governorate of this importance, its isolation is maintained by this "macro-cephalic" development model!

[Bernard Mossé: We know a bit about this in France: the French highway network was also long centralized.](#)

Fethi Rekik: Yes, but at this point, you risk inflating the capital, congesting it: we can't all live in Tunis...

This creates a feeling of marginalization in a good part of the interior of the country. These are the regions that voted for President Said: he is the representative of the people of the interior: we use the word El Jih and those who are not from the Center, in the geographical and economic sense...

[Bernard Mossé: In France, the term "Provincials" is still sometimes used to refer to those who are not from Paris...](#)

Fethi Rekik: Let me tell you an anecdote about this. I was invited a year ago by the Ministry of the Interior for a conference in a nice hotel in Gammarth, in the northern suburbs of Tunis. I was told that everything was fine, that the “interior” academics would be taken care of...

I said to him: are we the academics from the interior? Are you, in Tunis, the academics from the outside?

He apologized, but it is symptomatic of the representations, particularly of the Tunisians from Tunis.

Bernard Mossé: Has there been since 2011 a movement of revolt or expression of frustration from this Tunisia of the interior regions?

Fethi Rekik: That’s pretty much what happened in 2019. There was a feeling of revolt in the regions abandoned by the government, against the Islamists; But not only against them, against the modernist party of Nidaa Tounes too. In fact, it’s a feeling of revolt against the development model, and ultimately a feeling of revolt against democracy itself: “you are elected to move things forward, but ultimately nothing is done, growth remains close to zero. So it’s useless... What’s the point of democracy if it’s just to alternate the parties in power...”.

This is the explanation for the victory of Said elected by people outside the system, the marginalized.

The paradox of Sfax is that it is considered a governorate of the system because it would have its own means to develop. But it has never been a friend of the system and considers itself outside the system. It’s the tragedy of being considered in the system and not being there.

Bernard Mossé: Is it perhaps due to a gap between an old perception that persists of a prosperous and dynamic city while it is in decline? A gap between the past image and the present reality?

Fethi Rekik: Yes, there is still in common language the expression “Capital of the South,” while it is a city left to itself for about twenty years: the idea of a metropolis is chimerical.

I give you one last concrete example of this lack of perspective for the country of which Sfax is a victim.

When I presented the waste collection crisis in Sfax two years ago, I wanted to show a crisis that is not just local, but that perfectly illustrates this general crisis of vision.

So we are going to create a new landfill. But why not move to another model, more radical and worthy of a great city? Why not think about creating a transformation and waste treatment company, which could be an exportable model for other cities in Tunisia and even for other countries?

While in Sfax, they would be ready to move forward, the central power refuses such an ambitious project, as it does not see why it would benefit Sfax rather than another city. So we remain in the temporary and immobility.

It is undoubtedly the lack of money, and there are surely other priorities: the crisis is not new, and since the revolution of 2011, salaries have increased without a recovery in growth. But above all, there is no general vision capable of supporting major projects like this that would combine economic development and the environment.

In fact, to summarize, the city of Sfax faces major challenges related to industrial pollution, lack of investment, and a centralized governance that is not favorable to its development. Civil society is trying to address these shortcomings, but structural changes and an opening to foreign capital are necessary to transform the region into a sustainable economic hub.

Biographies



Fethi Rekik is a professor (HDR) of higher education and scientific research and director of the research laboratory 'State, Culture, and Social Changes' at the Faculty of Letters and Human Sciences in Sfax, Tunisia. He has also been an ecological activist in his city of Sfax since the 2000s.



Bernard Mossé Historian, Research, Education, and Training officer of the NEEDE Mediterranean association. Member of the Scientific Council of the Camp des Milles Foundation – Memory and Education for which he was the scientific officer and coordinator of the UNESCO Chair "Education for Citizenship, Human Sciences, and Convergence of Memories" (Aix-Marseille University / Camp des Milles).

Bibliography:

Salem DAHECH and Fethi REKIK, "Road Traffic and Noise Pollution in Sfax (Southern Tunisia): A Multidisciplinary Study." *Atmospheric Pollution Review*, no. 3, 2012.

Amor BELHEDI, "Regional Disparities in Tunisia. Challenges and Issues," pp. 7-62 in *The Conferences of Beit al-Hikma, 2019, 2017-2018, 194p + 112p in Arabic. Coll. Conferences*, no. V.

Ali BENNASR, "Sfax: From Regional City to Metropolis Project." University Publishing Center. *Globalization and Urban Change*, pp. 79-95, 2010.

Fethi REKIK, "Environment and Sustainable Development between the Global and the Local, Case of the Kneïss Islands," *CERES Review*, no. 132, 2006

Taoufik MEGHDICHE, "Sfax's Relations with Southern Tunisia: Some Elements of Reflection," *University Research Review*, no. 8, 2010, pp. 41-61.



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