The Arve Valley and Environmental Health: From Therapeutic Imagination to Eco-anxiety

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Introduction

Starting in the 19th century, the “good, pure, air of the Alps” was conceptualised as being a panacea against tuberculosis and respiratory diseases—amongst other ailments. This understanding of mountain regions as particularly good healthcare destinations—due to their unique environmental characteristics—was an important driver of alpine tourism until the 1970s, and participated in building a collective imagination of therapeutic high-altitude areas (Reichler, 2005; Vaj, 2005). In recent decades, however, air quality has become a public health issue in several Alpine valleys, most visibly since the first analyses were carried out in the late 1990s (Brulfert, 2004). This deterioration of air quality can partly be explained by increased transportation, industrialization, and the ever-increasing urbanization of mountain regions. High concentrations of atmospheric pollutants are also amplified by the unique topographic and meteorological characteristics of these places, which hinder their dispersion in the atmosphere (Jafrezzo et al., 2005; Quimbayo-Duarte et al., 2021). All of this contributes to a certain amount of fear and insecurity amongst local populations, which sits in stark contrast with the therapeutic representations of the Alpine regions mentioned above. It is, however, fully in line with the very current notion of eco-anxiety (also called solastalgia, see last section), which describes the impacts of socio-environmental and ecological effects on the psyche (Albrecht, 2005; Hickman 2020). Through a historical and chronological perspective, this article focuses on the perceptions and representations of air as health for populations living in a valley in Haute-Savoie, the Arve Valley. More specifically, we focus on the Passy Basin, which over the past few decades has seen a strong evolution in fears surrounding air quality. More generally, this article will explore to what extent mountain regions can be a site where a local
form of eco-anxiety develops, a concept generally associated with global environmental changes.

2 Between the 1920s and 1970s, the Plateau d’Assy, located on the heights of the commune of Passy, was listed amongst the better places to treat tuberculosis in Europe. It was home to a health resort, with a host of specialized establishments boasting of the region’s clean air. During the 1970s, medical progress, alongside the decreasing prevalence of tuberculosis in France, led to the decline of the “village of healing” (INA, 1945, translation). Two decades later, the first air quality analyses emerged, describing a worrying situation with high concentrations of certain pollutants.

3 At first denounced by only a portion of citizens, local environmental associations, the medical community and part of the political class, the issue of air pollution has gradually become an important public health issue in the region (Savioz, 2021). Indeed, the Arve Valley has become known in the media over the past two decades as one of the most polluted places in France. Scientific studies carried out in the Passy region concur, asserting that: “This location in the French Alps close to Mont Blanc is one of the worst places in France regarding air quality” (Sabatier et al., 2018, p. 2).

4 It has been demonstrated that chronic exposure to outdoor air pollution constitutes “[…] a major cause of morbidity (ill health) and premature mortality (early death)” (Samet, 2020, p. 63). Indeed, according to some estimates, air pollution causes nearly 7 million premature deaths per year on a global scale. In France, a study published in 2016 by Public Health France establishes that chronic exposure to fine particles alone is responsible for close to 48,000 premature deaths each year. In the Arve Valley, studies carried out in the 2000s revealed significant levels of particulate concentrations, well beyond standards set by European regulations (Jafrezzo et al., 2005, 2016). From 2010, public authorities attempted to remedy this through various public policies, but despite the adoption of these measures, every year, limit values are frequently exceeded. Furthermore, these initiatives have not reassured some inhabitants, who are concerned about their health and that of their loved ones. Air pollution represents a significant factor of anxiety for a considerable number of inhabitants of the valley, as I was able to observe during my investigation.

5 This article was written based on ethnographic research carried out between 2017 and 2019 in the Arve Valley, for my doctoral project (Savioz, 2021). The fieldwork portion of my research included an exploratory phase and five stays lasting an average of three months, representing a total of more than fifteen months spent in the Arve Valley. Over the course of several months, I conducted close to one hundred semi-structured interviews (with 58 men and 41 women, between 23 and 74 years of age). Their status ranged from elected officials, doctors, economic, scientific, and administrative actors to local residents and members of environmental associations. I also carried out participation observation in a range of settings, such as public conferences, demonstrations, marches, debates, general assemblies, and meetings. The research data was also enhanced by around fifteen interviews carried out between autumn and spring of 2021, concerning more specifically these feelings of anxiety.

6 Firstly, this article shows, through a historical perspective, how the therapeutic myth of the fresh air of the Alps was built from the 19th century onwards, and how the Plateau d’Assy in the Arve Valley became a major site in the fight against tuberculosis in Europe during the 20th century. Then, it presents the current situation in this valley regarding air pollution, as well as the reactions it causes. Lastly, this article focuses on
the anguish and anxiety linked to air pollution-specific health risks, by analysing the emergence of a feeling of eco-anxiety in the Arve Valley.

The Construction of the Alpine Therapeutic Myth

Over the course of the 19th century, new tourism practices emerged in the Alpine regions that could be qualified as medical tourism, health tourism or climate tourism. Hydrotherapy first, then altitude therapy, aerotherapy and heliotherapy all participated in the medicalization of the mountain space, and the air of the Alpine regions (Reichler, 2005). Specifically based on a “therapeutic mythology of the high-altitude cure” (Guignard, 2005, p. 63, translated), mountain territories have benefited from a curative aura and a therapeutic imagination linked to the supposed beneficial properties of the pure air and the altitude on human health. These characteristics were part of the imagination of the Alpine regions during the 19th and 20th centuries, and exist still today (Matos-Wasem, 2005).

The Fresh Air of the Alps: When Health Rhymes with Altitude

The prophylactic and curative virtues of mountain regions on human health have their origin in the empirical medical approaches carried out from the first decades of the 19th century (Barras, 2000). For one, a considerable body of research focused on physiological changes related to altitude, and to the multiple therapeutic benefits of this environment on the human body, such as blood oxygenation (ibid.). Furthermore, in the 1850s, “phthisic immunity” (immunity against tuberculosis) hypothesis emerged, allegedly observed in mountain populations (Vaj, 2005). This theory was popularized by several studies and surveys carried out by German, Swiss and American doctors, amongst others, as well as by the publication of several treatises on medical climatology that praised the many benefits of altitude on the respiratory system, particularly regarding treatment for tuberculosis (Barras, 2000; Vaj, 2005).

Although scientifically unfounded, these beliefs indexed the interactions between human bodies and their natural environment as important. From there, the therapeutic properties of mountain regions became a belief relayed by doctors globally (Guillaume, 1991), and were the basis of people’s imagination about Alpine places for a long time (Matos-Wasem, 2005). As a result, health cures in high-altitude regions, that started in Germany followed by Switzerland, were enormous successes and were replicated in other high-altitude regions (Vaj, 2005). By boosting mountain tourism, this phenomenon participated in the modernization of Alpine regions, and led to the construction of specialized infrastructure to welcome people suffering from tuberculosis, called sanatoriums (Cremnitzer, 2005). At the end of the 19th century, while countries such as Germany, Switzerland and the United States each had several dozen establishments specializing in the reception of tuberculosis patients, France only had a limited number. Because of the different medical insurance systems, and against a backdrop of Franco-German rivalry, part of the French political class, supported by many medical practitioners, opposed this type of treatment for patients, preferring to treat them in hospitals (Laget, 2005, 2006). In 1916, however, the law on dispensaries for social hygiene and anti-tuberculosis preservation (Bourgeois law) was adopted, followed by the adoption of the law on sanatoriums (Honorat law) in 1919. Both these
laws heralded a movement favourable to the construction of sanatoriums on French territory.

During the First World War, in 1917, alerted by several reports evoking the difficult management of tuberculosis in France, the Rockefeller Foundation sent a health mission to the country, the “Mission Rockefeller” (Grandvoinnet, 2010). Amongst them were two doctors, Alexandre Bruno and Paul-Émile Davy, whose aim was to build a village sanatorium, inspired by the Saranac Lake Village in New York State in the US, developed by Doctor Edward-Livingston Trudeau (Cremnitzer, 2005). Their objective was to create a national treatment centre for tuberculosis, in health resorts intended for the middle class, in which care would be covered by a free medical assistance program Sudan, 1978). In 1921, they decided on the Plateau d’Assy, on the heights of the commune of Passy at the foot of Mont Blanc, in the Arve Valley. This site met all the climatic criteria required for the development of a healthcare resort, as well as all the requirements of the 1919 law (Tobé, 2007).

The Largest High-altitude Health Resort in Europe: The Assy Plateau

In 1922, the project for the construction of a village sanatorium was made public. This was cause for alarm in surrounding tourist stations such as Chamonix or Saint-Gervais-Les-Bains, who were concerned about the image of the region being associated with a centre for tuberculosis patients (Sudan, 1978; Tobé, 2007). In 1922, the constitution of the Association of High Altitude Sanatorium Villages (AVSHA) was approved, and the project was designated as being of public utility. The AVSHA built four reception sites, which were considered to be architectural masterpieces (Cremnitzer, 2005; Lefebvre, 2008). Several other pieces of infrastructure were built, covered by private initiatives. Classified as a “health resort since 1930” (Sudan, 1978: 135), the Plateau d’Assy had -at its peak—more than 2,000 beds over around twenty establishments, including sanatoriums and spa hotels (Tobé, 2007). The reputation of this “largest mountain health resort” in Europe was international (Cremnitzer, 2005: 28). It attracted famous people, such as Marie Curie, who died there in 1934, or Igor Stravinsky who stayed there at the end of the 1930s (Lefebvre, 2008). From the birth of the health resort, the entire region benefited from a therapeutic imagination linked to its clean air and altitude, observable through slogans and advertisements such as “the road to health”, the “Healing resort”, or the “Village of Healing” (INA, 1945, translation1) to designate the commune of Passy and the Arve Valley more generally (figures 1, 2, 3, 4). These illustrations all depict alpine landscapes, with the mythical Mont Blanc in the background, and lean heavily on nature’s purity, fantasizing about its benefits and virtues, within the therapeutic imagination mentioned above.
Passy – Plateau d’Assy – Station climatique de cure – La route de la santé.
Original SNCF railroad company poster by Chab, 1942.
Medical progress, and the discovery of antibiotics including streptomycin and isoniazid, led to a gradual decline in tuberculosis nationwide. At the same time, both the medical and social representations of the disease evolved significantly: tuberculosis became a vanquished disease, and therefore without a future (Kehr, 2021). This phenomenon led to a drastic drop in attendance at sanatoriums in the country, including those in the Plateau d’Assy. Further sounding the death toll, in 1970, the Roc des Fiz (healthcare establishment for children) was destroyed by a landslide, causing the death of more than 70 people, including 56 children. This created a national stir, and accelerated the decline of the station for the years to come. Other sanatoriums attempted as best they could to adapt, offering other types of care or treatment, some establishments were transformed into holiday centres or collective accommodation, and others were abandoned (Sudan, 1978). Overall, however, over the years the healthcare station was active, the therapeutic properties that it vaunted—particularly those relating to clean air—contrast sharply with current concerns around air quality in the valley, as we will be demonstrated in the following section.
Figure 3

Passy, le village de la guérison (extrait).

Figure 4

Passy, le village de la guérison (extrait).
A Concerning Amount of Air Pollution at the Foot of the Mont Blanc

Despite the past medicalization of mountain regions, scientific investigations carried out in the second half of the 1990s underlined Alpine valleys’ heightened sensitivity to atmospheric levels of pollutants, being “[...] sometimes more polluted than the large urban areas” (Jaffrezo et al., 2005, p. 6, translation’). In the case of the Arve Valley, analyses carried out during the 1990s and 2000s showed regulatory values being regularly exceeded. This can be explained by a conjunction of anthropogenic factors (urbanization, presence of industries, transportation nodes, and residential areas), topographic characteristics (shape of the valley, mountain landscape characteristics, altitude, exposure to sun) and meteorological phenomena (inversion of temperatures, precipitation, wind types). The accumulation of pollutants in the lower layers of the troposphere, particularly at low altitudes where a large part of the population lives, is a threat to the health of the region’s inhabitants. The release of these environmental analyses triggered several protest movements, as well as the implementation of political and administrative measures.

A Valley Structure Conductive to Atmospheric Pollutant Concentration

The high concentrations of pollutants in the Arve Valley can be partly explained by the specific topoclimatological characteristics of this urbanized valley, nestled between several mountain ranges (Figure 5). The Passy Basin, in the heart of the valley, is a region that is particularly sensitive to pollutant concentrations, due to the geomorphological locks of Servoz and Cluses that prevent air circulation. These topographical features are responsible for a myriad of meteorological processes that directly influence air stability like wind patterns, atmospheric temperatures, and atmospheric pressure, all of which determine the levels of pollutant concentrations in the atmosphere and their dispersal. In the Arve Valley, weak wind types (Arduini et al., 2017; Sabatier et al., 2018) and winter anticyclonic episodes cause frequent temperature inversions. This limits vertical air flows and favours high concentrations of pollution (Chemel et al., 2016): low-altitude air layers remain cold, while upper layers warm up, and pollutants remain trapped in the lower layers of the atmosphere (also called a cold air pool) (Allard, 2016; Quimbayo-Duarte et al., 2021). This phenomenon causes regular episodes of pollution during winter periods, which can last several days to several weeks (Sabatier, 2019).
Analyses of air composition in the Arve Valley carried out recently by the Approved Air Quality Monitoring Association (AASQA) of the Auvergne-Rhône-Alpes region (called Atmo hereafter) revealed a worrying situation. Below is a list of the main pollutants listed:

- **Suspended particles** (PM10; PM2.5) are mainly produced by household wood heating (which contributes ~70% of the particles emitted; Atmo, 2019). While annual average concentrations in the valley meet national standards, annual daily exceedances remain problematic (Jafrezzo et al., 2018). Upon entering the human body, fine particles are a factor in the development of chronic pathologies, such as cardiovascular diseases, respiratory or neurological problems, and cancers.

- **Nitrogen oxides** (NOx) are mainly the result of transportation (70% of emissions) and are concentrated around the valley’s roads (Atmo, 2019). NOx is a toxic gas that affects the respiratory tract and irritates the eyes. For frail or vulnerable people, exposure to NOx in high concentrations, or chronic exposure, can trigger more serious problems (Samet, 2020).

- **Benzo[a]pyrene emissions** are mainly concentrated in the area between Passy and Sallanches. Between 2008 and 2016, the rates there exceeded national standards every single year, mainly due to industrial activities (Golly et al., 2015; Jaffrezo et al., 2018). This polycyclic aromatic hydrocarbon (PAH) has teratogenic and carcinogenic properties, and it can cause—amongst other things—leukemia, skin allergies, genetic abnormalities, and can affect fertility and child development.

- **Tropospheric ozone** (O3) is a secondary pollutant that is created from nitrogen oxides (NOx) and volatile organic compounds (VOCs), and principally an issue during summer months. A gas that is harmful to the human respiratory system, it can cause asthma or other chronic pathologies in vulnerable or frail people.

Industrial processes located at the bottom of the valley are also responsible for the emission of several other types of pollutants, such as volatile organic compounds (VOCs), heavy metals, dioxins and furans. All of these are currently under observation around the Intercommunal Syndicate for the Treatment of Household Waste (SITOM) of Passy (Atmo, 2019), and according to various analyses, though these pollutants do not exceed regulatory values, they are no less serious health threats in the eyes of the population.
The Socio-political Construction of Air Pollution as a Public Health Issue

Health issues related to air pollution had already been denounced during the 1990s by an environmental association in the Chamonix Valley: more specifically, they were concerned with the potential impacts of black smoke emitted by international road traffic on human health (Figures 6 and 7). While at the time, these accusations remained cloistered within the NGO ecosystem, they emerged in public debates in the mid-2000s, following the publication of various studies, which were particularly reported in local presses (Savioz, 2021). Several protest movements emerged, made up of environmental protection associations, citizen groups, representatives of the medical profession in the valley and a few local elected officials. These movements denounced departmental and regional authorities’ minimization of the health consequences of atmospheric pollution in the valley. Public authorities, however, were also increasingly alerted by frequent exceedances of European standards, observed almost annually since the end of the 1990s in the Chamonix Valley, as well as since 2006 in the Passy Basin (Roussel, 2016).

Figure 6

Blockade.
Association pour le respect du site du Mont-Blanc (ARSBM) archives.
Faced with new European directives on air quality, and under pressure from social movements, an Atmosphere Protection Plan (PPA) was adopted in 2012, with the aim of setting regulatory objectives that were adapted to mountain territory. Nevertheless, the diagnosis made—that of polluting emissions—and the forecasts made during the development of this public policy did not convince the valley’s population, and contributed to fueling a certain “reluctance of the population” (Roussel, 2016, p. 253, translation).

Much was said to particularly denounce the measures’ focus on the inhabitants of the valley and on the residential sector, with a perceived laxity for the international transportation and industrial sectors. Over winter 2016/2017, a 35 days-long pollution episode triggered an unprecedented wave of mobilizations in the valley, bringing to a head the tensions around air quality in the region (figures 8 and 9). A second PPA was then adopted in 2019 to remedy the shortcomings of the first version of the public policy. Nonetheless, as air quality analyses of recent years show, the valley still faces all-too-high levels of pollution.
In 2017, a quantitative health impact assessment (EQIS) of the Arve Valley was published by Public Health France, the first of its kind in such a small territory. This health assessment aimed to measure only the health consequences of particulate...
pollution (PM\textsubscript{10}; PM\textsubscript{2.5}) for valley inhabitants. It concluded that “68\% of the population of the Arve Valley is exposed to levels higher than those recommended by the WHO (which are of 10 \(\mu\)g/m\textsuperscript{3} on average per year)” (Pascal et al., 2017, translation\textsuperscript{7}). The study also estimated that “8\% of the mortality in the Arve Valley, that is 85 deaths per year, could be linked to PM\textsubscript{2.5} fine particles, and that on average, valley inhabitants could lose an average of 9 months of life expectancy” (ibid., translation\textsuperscript{8}). A new study published in autumn 2021 by Public Health France showcased an even heavier rate of mortality caused by pollution, i.e., 93 deaths per year (Yvon, Yvroud, 2021). These figures have impacted the daily life of some valley inhabitants, becoming a source of constant anxiety against which fighting has become incredibly important. To this end, residents of the valley have filed a complaint against the State for “culpable deficiency”, recognized by the Grenoble court in November 2020.

Towards the Emergence of Air Pollution Eco-anxiety in the Arve Valley

The contrast between understandings of the Arve Valley during the 1920s–1970s period and today respectively testifies to two things: first, an evolution in representations of the environment, and secondly, a change in the notion of health (Kalaora, Vlassopoulos, 2013). These two aspects are, in turn, influenced by scientific progress around the impact of certain risks on human health, coupled with the multiple public health crises that have emerged in recent decades (Gilbert et al., 2009). The current definition of health proposed by the WHO is increasingly linked to societal living conditions, to forms of political organization, and to the environment (Scarwell et al., 2013). This form of “sanitization of the social” and “ politicization of health”, places these themes at the heart of public debates (Fassin, 2000, translation\textsuperscript{9}). Since the early 2000s, “environmental health” issues have shaken the social sphere and are an ever-growing concern for populations, as shown by their increased institutionalization (Guilleux, 2015). In response to increasing feelings of anxiety towards one's environment, the notion of “eco-anxiety” was conceptualized in the 1990s to designate “[...] a form of pre-traumatic stress resulting from the perspective of ecological conditions deemed uncertain, unpredictable and uncontrollable, even existentially threatening” (Koller, 2022, p. 170, translation\textsuperscript{10}). A few years later, in the mid-2000s, philosopher Glenn Albrecht articulated the concept of “solastalgia” to describe states of anxiety, generated by feeling both vulnerability and helplessness in the face of potential environmental threats (Albrecht, 2005). In these contexts, the sensory and physical experience of risks further accentuate this feeling of distress.

The representations that I encountered during my research, of Arve Valley inhabitants’ perception of their environment and its risks, are particularly echoed in this “solastalgic vision”. In this section, I will explore this through various testimonies—I will, however, refrain from proposing that eco-anxiety is generalized for the entire population of the valley. Though contrasting opinions around this coexist in the valley, this article presents the voice of those who have fears and anxieties concerning their environment. In the context of the Arve Valley, the environment is understood by part of the local population mainly as a threat to their health and that of their loved ones: “Here, breathing is dangerous for your health,” as someone pithily told me (translation\textsuperscript{11}). Contrary to other environmental phenomena that are more difficult to
observe, such as increased rates of CO2 in the atmosphere, industrial discharge or transportation smoke are visible to the naked eye: “In the morning, when I go to work, I see this stagnant layer, like smog covering the plain,” explained a resident of Passy (translation12). The very visible nature of certain pollutants thus plays an important role in the relationship that populations have with their environment. Not all forms of pollution (whether gas or particulate) are visible, however, and visible pollution does not necessarily represent actual concentration levels. A resident of Sallanches explained to me that seeing pollution has radically changed his perception of the valley:

I wasn’t seeing it, even though I’ve lived here for 20 years. But once you start seeing it, it’s the only thing you can see, and from then on, you have this sort of extreme vigilance, if not psychosis... You no longer feel safe anywhere, even in your own home, it’s awful, whereas before, you wouldn’t even think about it. (translation13)

Notwithstanding this very observable pollution, the central node of the fears and tensions of most of my participants was its health consequences for children. As a resident of the valley explained to me:

My son had chronic bronchiolitis during his first few years of life. Now, he is 8 years old and he is asthmatic, with bronchial inflammation all year-round, but especially in winter during pollution peaks. My wife and I take pills to be able to sleep, and for the last several years we have been seeing a psychiatrist every week. We feel a lot of guilt about our child, and we’re worried about developing cancer ourselves... I don’t know how long I can last like this, and unfortunately, we don’t have the means of leaving now, but if we could, we wouldn’t hesitate. (translation14)

This interview excerpt showcases distress and a pervasive sense of injustice about the health of this child. It testifies to a high sense of disarray in the face of the health risks associated with valley air, and great psychological distress. The feelings of anxiety brought up in many other interviews were systematically linked to the risks of cancer or the health of children. This demonstrates that air pollution is not only observed—via published figures and measurements—, but that it is also experienced by individuals, through an embodied and emotional experience (Quéré, 2012), and is thus an embodied problematic (Little, 2012). In other words: exposure to various forms of toxicity is socially experienced as a form of “environmental suffering”, which generates emotional, physical and psychological distress (ibid., p. 1).

To conclude, my research has focused on the emergence of air pollution perceptions, which contrast radically with the representations of the Alpine regions which dominated the 19th century and a large part of the 20th century. Perceptions of air pollution appeared marginally during the 1990s amongst activists from environmental associations in the valley, through “an animal perception of the phenomenon”, that is, based on what “we were feeling, sniffing, seeing, hearing” (translation15). These health fears around air pollution were not yet shared by the majority of the valley’s population, however. A broader understanding of air pollution’s health impact emerged only later, between 2005 and 2010, which is when anxiety began to develop. As a doctor from the valley put it: “There was a turning point a little before 2010, when they installed sensors in the plain... After that, I was visited by many parents who blamed air pollution for all their children’s ills” (translation16), a statement that was confirmed by an individual who had been involved in public administration since the early 1990s. The health consequences of air pollution only became apparent when the first measurements carried out in the Passy region were published:
That was really how public health as a theme emerged in the valley. Before that, I had never heard of health problems or respiratory problems being linked to air quality. [...] I think there really is something to understand there between the feeling, the subjective aspect of things, and the knowledge of a problem. (translation?)

This quote once again underlines how important the impact of the perceptions and representations of the environment can be on the populations living there.

**Conclusion**

In conclusion, this article analyses the nature of the links between health and environment over two periods in the Arve Valley. Until the 1970s, the air of the Arve Valley, and Alpine valley more generally, was perceived to be a beneficial resource for human health. This understanding of high-altitude regions and their pure air was based on magico-mystical beliefs and perceptions, notably inherited from romantic representations of the sacred mountain (Cronon, 1995); but also based on empirical medical approaches (Barra, 2000). The first scientific analyses of air composition in the Arve Valley, carried out during the 1990s and 2000s, revealed significant concentrations of pollutants. These analyses contributed to an evolution in perceptions of the air and environment in the region: they became a central element in local citizens’ requests, and contributed to the emergence of a sense of eco-anxiety. This article illustrates how this concept can be applied on a local scale, when it threatens the well-being and the quality of life of the populations, in this case within the framework of a mountain territory. This feeling of anxiety, very often considered to be individual’s emotional understanding of environmental, is based, in this specific case, on the state of scientific knowledge of the biochemical composition of the atmosphere, shedding light on a series of risks for human health. In other words, the evolution of knowledge represents a factor of uncertainty (Callon et al., 2001), and in this case study, a factor of anxiety. Faced with the current challenges of climate change, particularly felt and observable in these regions (Clivaz, Savioz, 2020), many uncertainties remain as to the evolution of air quality in the Arve Valley and the Alpine valleys more generally. For example, rising temperatures may reduce thermal inversions, and thus partly reduce people’s reliance on wood heating, which is a main source of fine particle emissions. Simultaneously, however, rising temperatures will increase ozone concentrations with warmer summers. It is therefore legitimate to wonder about the impacts of scientific knowledge dissemination concerning these future issues, on the local populations of the valley.

**BIBLIOGRAPHY**


NOTES

1. Original text: “le village de la guérison”.
2. Original text: “mythologie thérapeutique de la cure d’altitude”.
3. Original text: “La Route de la Santé”, “Station Climatique de Cure”, “Village de la Guérison”.
4. Original text: “parfois plus polluée que les grandes zones urbaines”.
6. Original text: “réticences de la population”.
7. Original text: “68 % de la population de la vallée de l’Arve serait exposée à des niveaux dépassant la valeur recommandée par l’OMS (10 μg/m3 en moyenne annuelle)”.
8. Original text: “8 % de la mortalité de la vallée de l’Arve, soit 85 décès par an, serait attribuable aux particules fines PM2,5, et qu’en moyenne 9 mois d’espérance de vie seraient perdues par les habitants de la vallée”.
10. Original text: “[…] une forme de stress pré-traumatique issue de la prospective de conditions écologiques jugées incertaines, imprévisibles et incontrôlables, voire existentiellement menaçante”.
11. Original text: “ici, respirer c’est dangereux pour la santé”.
12. Original text: “Le matin, quand je pars au travail, je vois cette couche qui stagne, comme un smog qui recouvre la plaine”.
13. Original text: “Je ne la voyais pas et pourtant j’habite ici depuis 20 ans. Mais quand on commence à la voir, on ne voit plus que ça, et à partir de ce moment on vire dans une forme de
vigilance extrême, pour ne pas dire de psychose... On ne se sent plus en sécurité, même chez soi, c’est terrible, alors qu’avant, on ne se posait pas de questions”.

14. Original text: “Mon fils a fait des bronchiolites à répétition durant ses premières années de vie. Aujourd’hui il a 8 ans et il est asthmatique, avec des inflammations des bronches toute l’année, mais surtout en hiver pendant les pics de pollution. Ma femme et moi prenons des cachets pour pouvoir dormir, et depuis plusieurs années on voit un psychiatre toutes les semaines. En fait, on culpabilise beaucoup pour notre enfant et en même temps on angoisse à l’idée de développer nous-même un cancer... Je ne sais pas si je vais tenir longtemps comme ça, et malheureusement, on n’a pas les moyens de partir actuellement, mais si on pouvait le faire, on n’hésiterait pas”.

15. Original text: “une perception animale du phénomène », « qu’on sentait, qu’on reniflait, qu’on voyait, qu’on entendait”.

16. Original text: “Il y a eu un tournant un peu avant 2010, avec l’installation des capteurs dans la plaine... Et après ça, j’ai reçu énormément de parents qui parlaient de l’air comme cause de tous les maux de leurs enfants”.

17. Original text: “La thématique de la santé publique est vraiment apparue comme ça dans la vallée. Avant cela, je n’avais jamais entendu parler de problèmes de santé, de problèmes respiratoires liés à la qualité de l’air. [...] Je pense qu’il y a vraiment quelque chose à comprendre entre le ressenti et l’aspect subjectif des choses et la connaissance d’un problème”.

ABSTRACTS

This article contrasts two periods of time in the Arve Valley, during which particular attention was paid to the links between human health and the environment, but with diametrically opposed perceptions. Historically, the Plateau d’Assy in the Arve Valley was a major healthcare destination, particularly specializing in the treatment of tuberculosis between the 1920s and 1970s. From the 19th century onwards, a collective imagination emerged around the myth of clean air of the mountains. Alpine regions broadly benefited from being considered particularly sanitary, and this was the engine of local tourism until the 1970s. Though the therapeutic characteristics of the mountains still exist today, scientific analyses carried out from the 1990s have underlined the great vulnerability of the Alpine valleys to atmospheric pollution. This is the case of the Arve Valley which, over the past two decades, has become infamous in the media for its poor air quality. Now understood to be a significant public health issue, air pollution in this region has become a major source of fear and anxiety for part of the local population. Though this contrasts sharply with past therapeutic representations of the mountains as mentioned above, current fears around air quality in the Arve Valley find themselves echoed in broader societal debates around environmental health and eco-anxiety.

Cet article concerne la Vallée de l’Arve à travers deux périodes au cours desquelles une attention particulière a été portée sur les liens entre santé et environnement avec deux visions diamétralement opposées. Historiquement, le Plateau d’Assy dans la Vallée de l’Arve a été une des grandes destinations climatiques spécialisées dans le traitement contre la tuberculose entre les années 1920 et 1970. Fruit d’un imaginaire collectif construit autour du mythe de l’air pur des montagnes, les régions alpines de manière générale ont bénéficié dès le XIXe siècle d’un processus de sanitarisation qui constituait le moteur du tourisme local jusqu’aux années 1970. Si ces
caractéristiques thérapeutiques subsistent encore de nos jours, les analyses scientifiques menées dès les années 1990 soulignèrent la grande vulnérabilité des vallées alpines à la pollution atmosphérique. C’est le cas de la Vallée de l’Arve qui, au cours de ces deux dernières décennies, s’est faite médiatiquement connaître pour sa mauvaise qualité de l’air. Apprécidée comme un enjeu majeur de santé publique, la pollution de l’air de cette région est devenue une source importante de crainte et d’anxiété pour une partie de la population locale. Si ce phénomène contraste fortement avec les perceptions et les représentations thérapeutiques évoquées précédemment, elles trouvent un écho particulier avec les préoccupations liées à la santé-environnementale et aux enjeux actuels d’éco-anxiété.

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