



FREE FLOW

BEATRIZ KLETTNER SOLER

Master Thesis FS22
VOLUPTAS Chair Charbonnet / Heiz ETHZ
Chair for the Theory of Architecture Prof. Laurent Stalder ETHZ

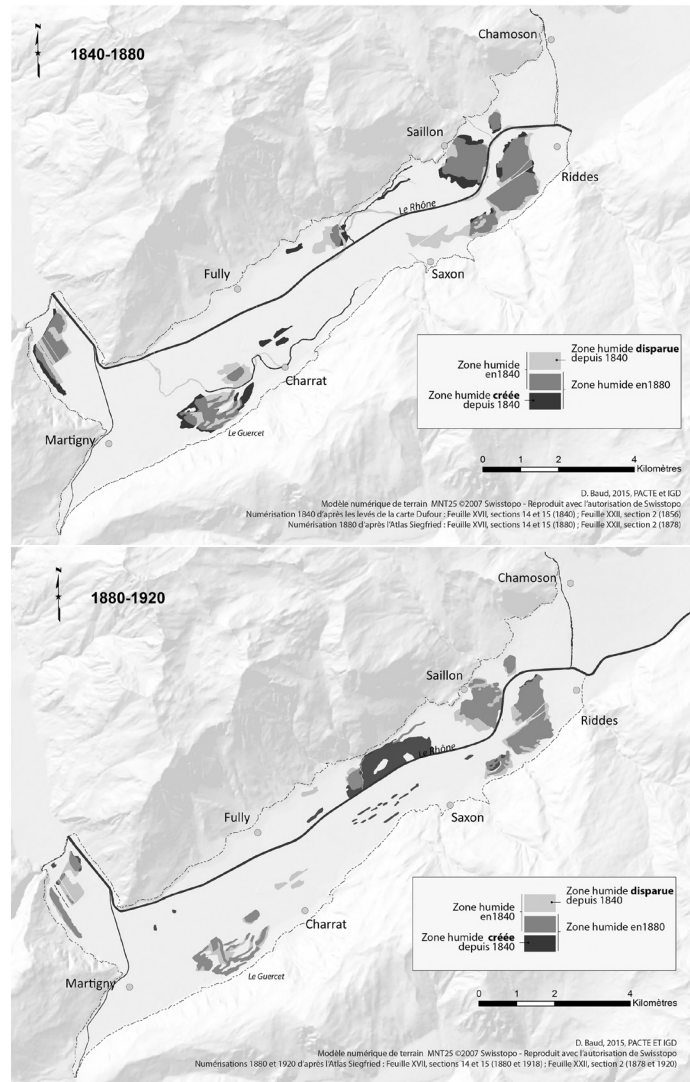
I

TECHNOLOGY VS. ROHNE



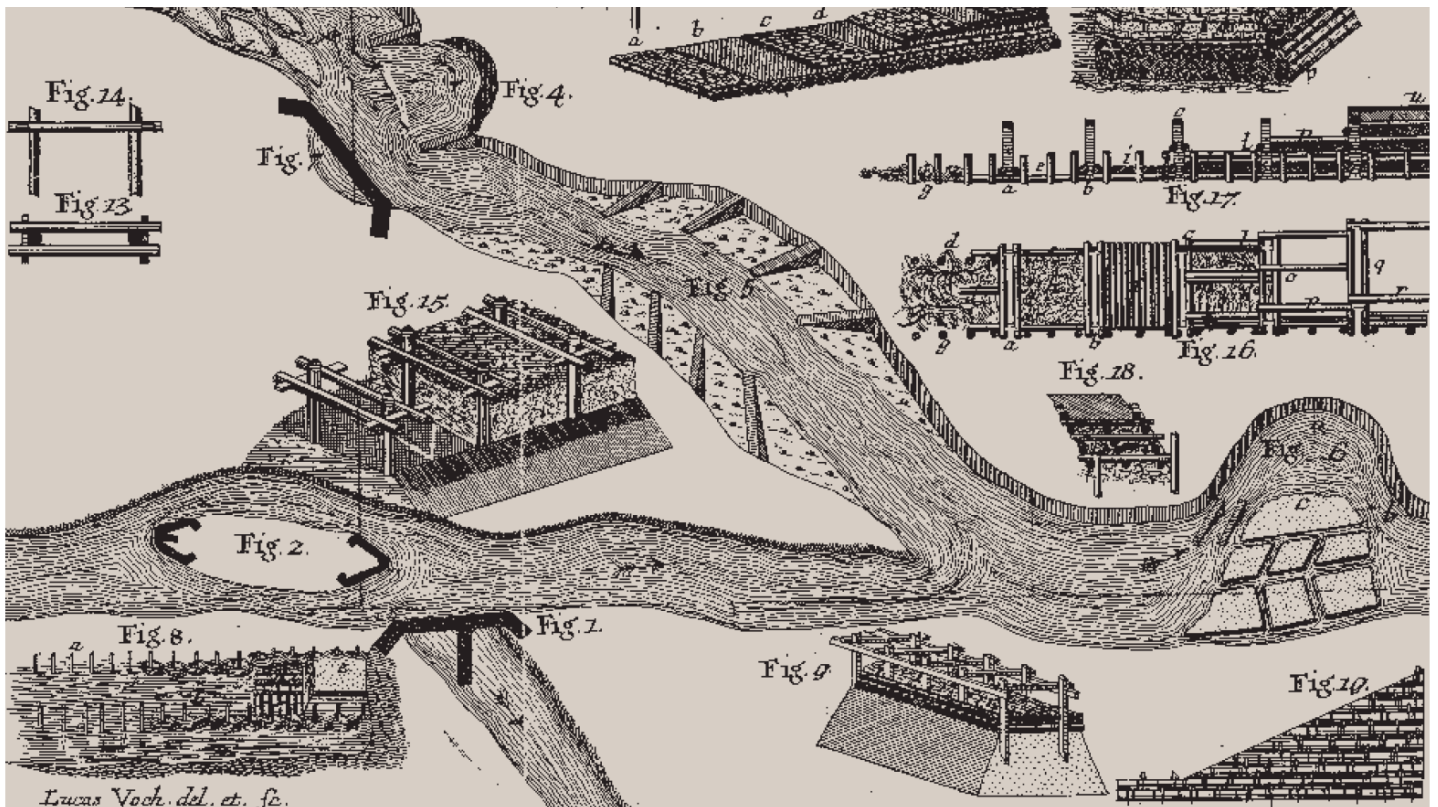
PONTS ET CHAUSSEES, MEDIATHEQUE VALAIS (1862)

Thanks to the cantonal law ~~in Valais~~ of 1833, the council of state can order municipalities to carry out work of the river. However no subsidy is paid for their execution. The land, both for the bed of the Rhone and the railway line, was to be made available free of charge by the local authorities. The engineers corrected the river by constructing dykes in order to contain the flow of water, which plunged ~~the~~ Valais into a terrible economic and financial crisis. Furthermore, as the Rhone burst its banks every year ~~it~~ destroyed not only the dykes but also the confidence of the engineers. One flood followed another. The Valaisans were like the gambler who is promised Eden but who ends up losing everything - or almost.



DOMINIQUE BAUD AND EMMANUEL REYNARD , SYNCHRONIC MAPS (2015)

~~At the end of the 19th and start of the 20th century,~~ the Rhone plain was considerably different in its appearance from what the engineers of the 1st correction of the river had imagined. Changes in the river bed had created stagnating water: almost a third of the territory of the river bed was occupied by ponds, and the rise in the level of the bed was of almost one metre, which placed the plain under constant threat of flooding.



L. VOCH, ANLEITUNG ZUM BAU VON LÄNGS- UND QUERWERKEN IM FLUSSBAU (1767)

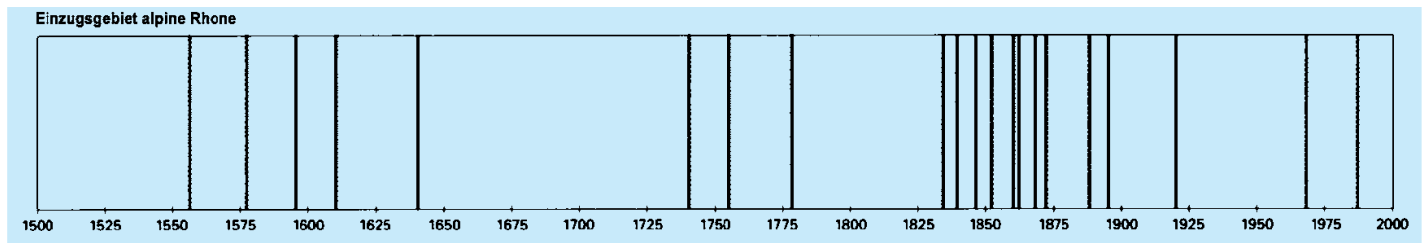
The population of Valais feared the river, and the flooding that came with it. The Rhone had invaded their land over and over again, bringing destruction to their homes. However, Marc-Antoine Puvis, at the time a respected agronomist, Deputy, and President of the agriculture society of the French Department of Ain, close to Geneva, praised the fertilizing effect of seasonal floods, which for him largely made up for the their negative aspects, and denounced the longitudinal diking of rivers as "absolutely disastrous," for these dikes "tend to constantly raise riverbeds and leave pestilential wetlands behind".



SUR LE LIT DU RHONE, VALAISAN CAMARGUE (1920)

The Valaisan Camargue is a form of landscape that originated before and after the 1st correction of the Rhone. The river broke its banks and created a savage environment ~~where it was in charge~~. The Rhone had several arms, produced ponds as well as dunes and increased the amount of forestry and vegetation.

The Rhone was breaking free of its embankements and until the middle of the 20th century, dominated the plain. Flood after flood, the river embraced its dominance by transforming the landscape and increasing the biodiversity of Valais. The fishing industry bloomed.



SUMMERMATTER, EXTREME FLOODING IN THE RHONE BASIN (2006)

The inhabitants of the Isère Valley in Savoy, and those of the Rhône Valley in Switzerland, locally saw marshland expand and malaria spread during and after the diking works meant to achieve the opposite result. More intriguing are the promises of eradicating flood risks and fluctuations that could never and would nowhere be made true, since the assumption that a landscape and a hydrological system could be stabilized, if not petrified, later proved to be totally wrong.

“Despite the successive adaptations and corrections, the belief that a battle between rivers and technology was going on, and that technology would eventually triumph, could still be found until just recently.”

FREDERIC ROSSANO, FLOODSCAPES (2016)

II

NEW CALIFORNIA VS. CAMARGUE



UNKNOWN MAURICE TROILLET (1934)

On 8 November 1915, the Grand Conseil allocated substantial funds to ensure that the comparison of the Valais canton with the Camargue would no longer be a valid one. All eyes were turned towards the far west. « After that, Gentlemen, we will not need America; we will have our own America ». Such was the claim of Maurice Troillet, a conservative State councillor who involved the canton in extensive agricultural development works to give the next generations an alternative to working in the factory. Ten thousand hectares of farmland were to be created on the former marshes.



MUSEE DU GRAND-SAINT-BERNARD, PHILIPPE FARQUET (1930)

There was little or no opposition to this huge project, which was started in 1917 and completed 15 years later and which was to completely and permanently change the physiognomy and economy of the plain. Only Philippe Farquet, self-taught scholar and non-conformist, who wrote regular columns in the local press under the name of Alpinus, seemed to lament the disappearance of the Valaisan Camargue. His languor and intimacy with nature were in sharp contrast with the much more utilitarian sentiments of his contemporaries.



RAYMOND SCHMID, BURGEOISIE DE SION, MEDIATHEQUE VALAIS (1946)

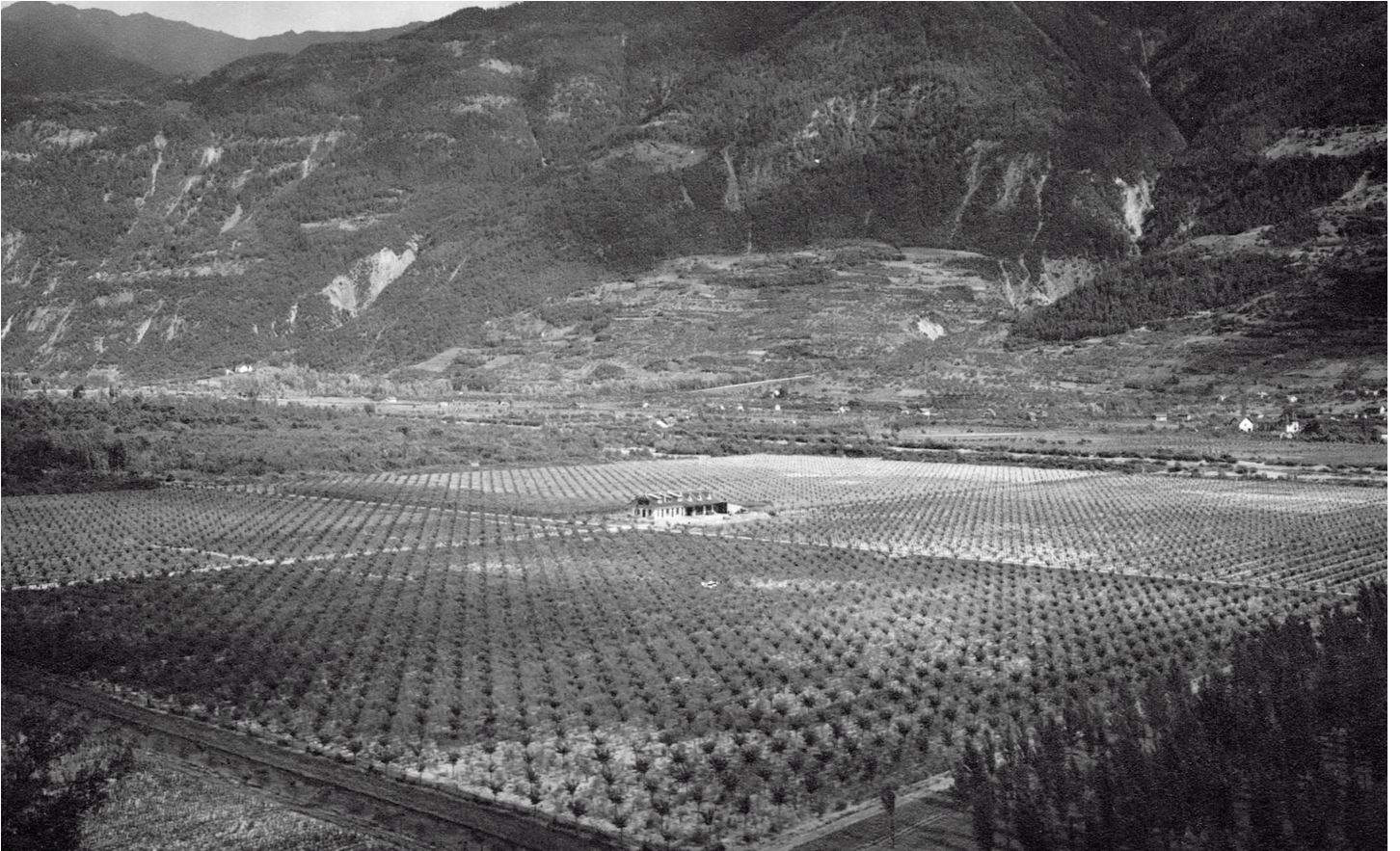
From 1936 to 1944 new works were started to increase the river's flow rate. A retaining structure of huge blocks reduced the width of the riverbed and increased the power of the river, while at the same time isolating it even more in its channel. This works where known as the second Rhone correction.



SUR LE LIT DU ROHNE, LANDSCAPE OF VALAIS (1880)

Philippe Farquet was a crucial voice in Valais in the 1920s. He reported all political meetings to the Valaisian papers and was critical of the “politique **dictatorial**” of M. Troillet. He was never vocal about his opinions but disguised them into his articles. He supported the “**liberaux-radicaux**”. **On the 25 of february 1925**, there was an assembly of 300 members of the liberal-radical party demanding to be represented by the government. There was an altercation between the liberals and the conservatives that lead to a further polarisation of opinions, and ended on **the 1st of march** with the **winning** of Maurice Troillet as a member of the “**Conseil d’Etat**”.

Philippe Farquet represented the opinions of the liberal-radicals, who also supported the conservation of the Valaisian Camargue, but was **shut down** when M. Troillet won the elections.



SUR LE LIT DU ROHNE, AGRICULTURAL LANDSCAPE (1950)

Should we weep for the lost Camargue or celebrate a new California? Authors who have written on this subject do not waver. The relationship with nature is perceived first and foremost from the point of view of a struggle, of controlling the elements, of **conquering**. Prosperity is measured in the way in which nature is tamed to meet the needs of mankind. The landscape of Valais was forever influenced by the political decision of New California. The consequences were a main focus on farmland and infrastructure, on correcting and expanding. This meant a redefinition of what Valais **as a canton** ~~was~~.



ANONYMUS, MONTANA VERMALA, VALAIS SUISSE (1945)

Historically, the Farquet Position means that through-out history, an understanding of durability and harmony with nature has been taking place. Philippe Farquet, Marc-Antoine Puvis and the liberal-radicals are only some examples of a mentality of intimacy and respect for the environment. Their voices have been ignored by political figures with a strong agenda, but remain a pillar of important thought and values that influence society today.

Valais

Crans-sur-Siwa, one of the region's most picturesque villages.

Crans-sur-Siwa is one of the most picturesque villages in the Valais region. It is a small town with a population of about 1,000 people. The town is known for its beautiful scenery and its historic architecture. The town is located in a valley, and it is surrounded by mountains. The town is a popular destination for tourists, and it is a great place to visit if you are looking for a peaceful and scenic vacation.

Valais is a small canton in the southwestern part of Switzerland. It is known for its beautiful scenery and its historic architecture. The canton is located in a valley, and it is surrounded by mountains. The canton is a popular destination for tourists, and it is a great place to visit if you are looking for a peaceful and scenic vacation.

Hotels and restaurants

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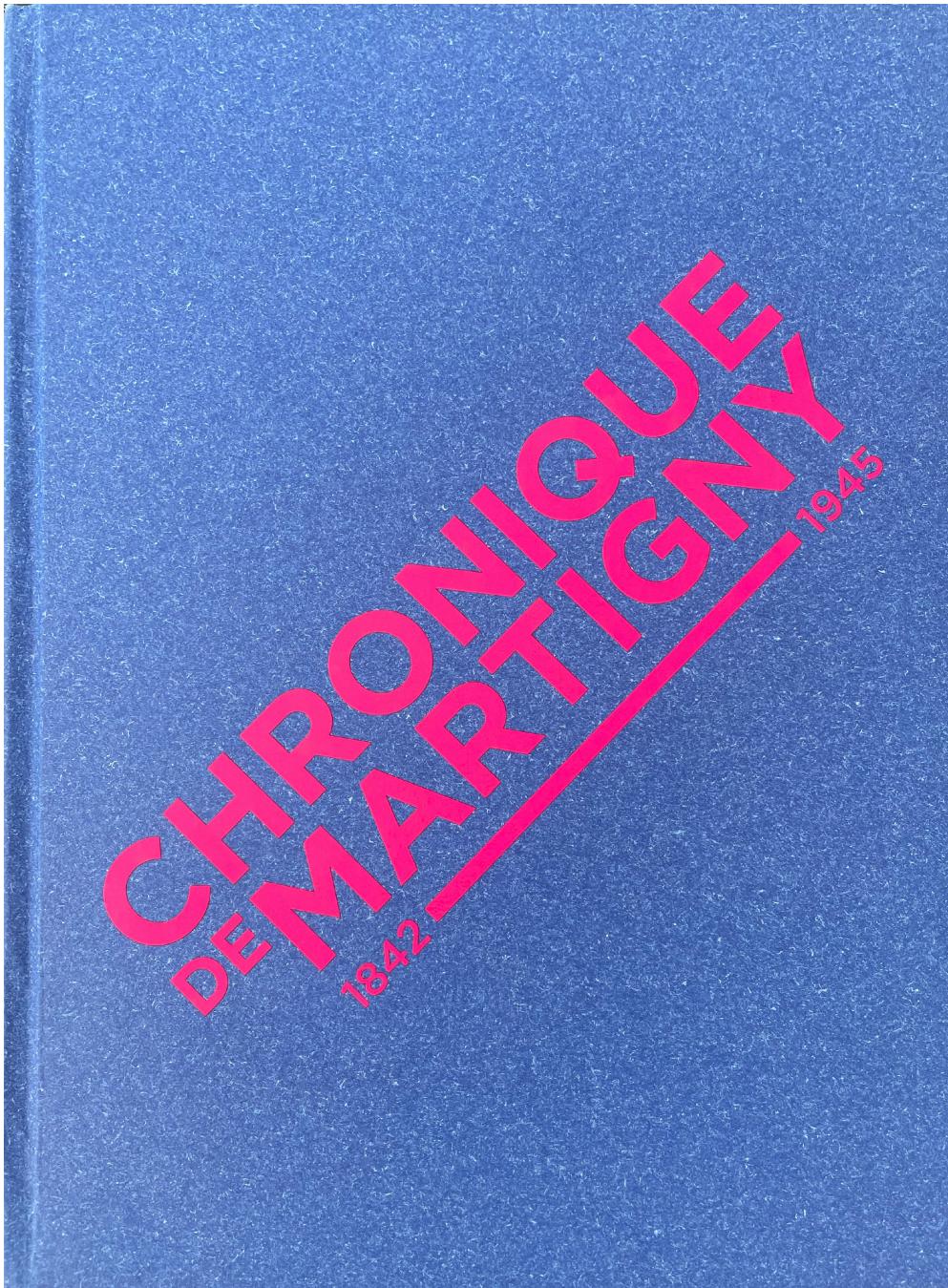
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JOHN DORNBERG THE NEW YORK TIMES (1991)

"The Swiss canton of Valais is a small piece of turf -- an area about the size of Delaware tucked into the southern tip of the country -- but more varied in scenery, topography, culture, customs, language, travel pleasures and life styles than any other region in the country. (...)

It is also known as the California of Switzerland (...)"



PHILIPPE FARQUET, CHRONIQUE DE MARTIGNY (1945)

In the book “La Chronique de Martigny de 1842 à 1945”, Philippe Farquet captures all the political moments of the ~~time. From~~ elections to protests. The 1st of march 1925, the election for the deputies of the Grand Conseil and the Conseil d’Etat are held. Maurice Troillet is elected to the Conseil d’Etat by 15,584 votes.

What if, Maurice Troillet had never been elected?

If the liberal-radicals had won a position in government ~~instead~~, the Valaisian Camargue could had been saved, and the landscape preserved. Would the second correction have happened, or would Valais now be a floodscape?

III

NEW CAMARGUE



SUR LE LIT DU RHONE, WORKS ON THE FIRST ROHNE CORRECTION (1862)

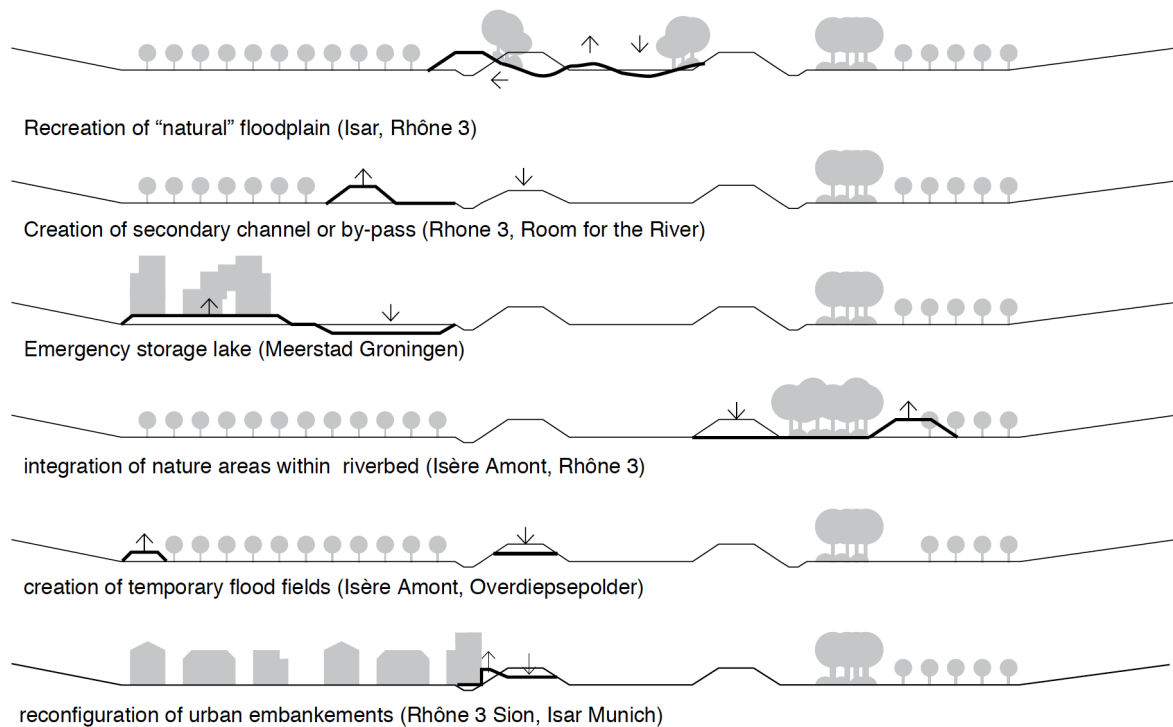
European floodplains today still show this combination of flood-made and man-made landscapes, revealing a long history of negotiation. The Enlightenment changed this paradigm, and since the 17th century, the belief has grown that technique could solidify landscapes into stable constructions, emancipate humans from riverine fluctuation, and guarantee an endless exploitation and permanent urbanization of floodplains. The joined forces of empowered nation-states, positivist philosophy, and increased engineering knowhow have constructed a common belief that technology would ultimately tame the waters for good, and provide a forever stable living environment. The radical landscape transformations that followed fueled Europe's agricultural and demographic surge in the 19th and 20th century, but also began a presumptuous cycle of ever-rising levees and growing flood exposure up until the present.



SUR LE LIT DU RHONE, WORKS ON THE THIRD RHONE CORRECTION (2016)

European rivers in the 18th to 20th century responded less and less to God's orders, or to nature's unpredictable temper, and more and more to the will of political authorities and the skills of their engineers. Flood protection integrated the domains of the land surveyor and the engineer, from the deltas up to the Alpine valleys, with the techniques used then to reinforce river edges and reclaim new land. The physical transformation of rivers and wetlands was thus directly related to the political structuring of national and regional powers.

So, each wetland reclamation and river correction rapidly created the problems that would lead to the next correction- a correction of a correction - initiating a spiral of technical intervention that has lasted until the end of the 20th century.



Typology of interventions found in the case studies: Conventional vertical interventions and horizontal adaptive measures

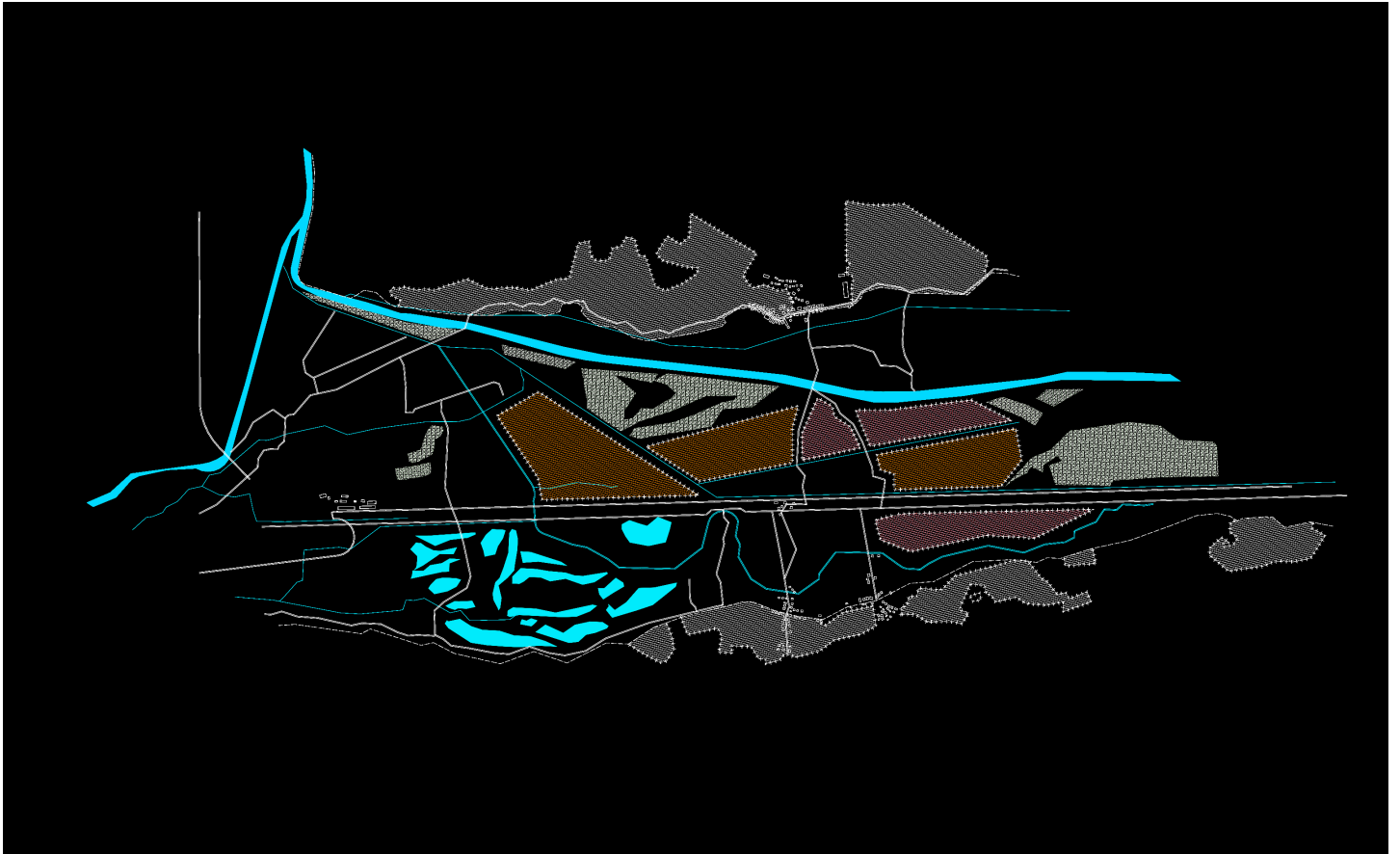
FREDERIC ROSSANO, FLOODSCAPES (2016)

Everywhere in Western Europe, centuries of repeated 'corrections' have not only expanded urban and arable land at the cost of the river's fluctuation space but have also blinded populations to flood risk, literally by hiding waters behind ever-rising levees and culturally through propagating Promethean hopes of final victories of man's technology upon nature's forces. In an uncertain context, flexible and horizontal approaches tend now to complete or replace flood defence infrastructure, as the notions of resilience and damage control gain ground and acceptance. This approach, though not totally new, represents a significant move away from full protection strategies, as they paradoxically imply accepting disaster in order to better control it.



ROSSANO/KUENZEL, FLAUCHER AREA AT ISAR RIVER (2013)

In the 21st century, recent developments in the architecture of flood-prone landscapes show that natural fluctuations can be reinserted into our living environment, simultaneously exposing the reality of flood and minimizing its devastating effect. As the myth of absolute protection fades away with every dyke breach, and with new alarming climate-change prognoses, contemporary flood prevention tends more and more to facilitate and control inundation instead of excluding it, and by this, reintroduces flooding as an agent of territorial design and perception.



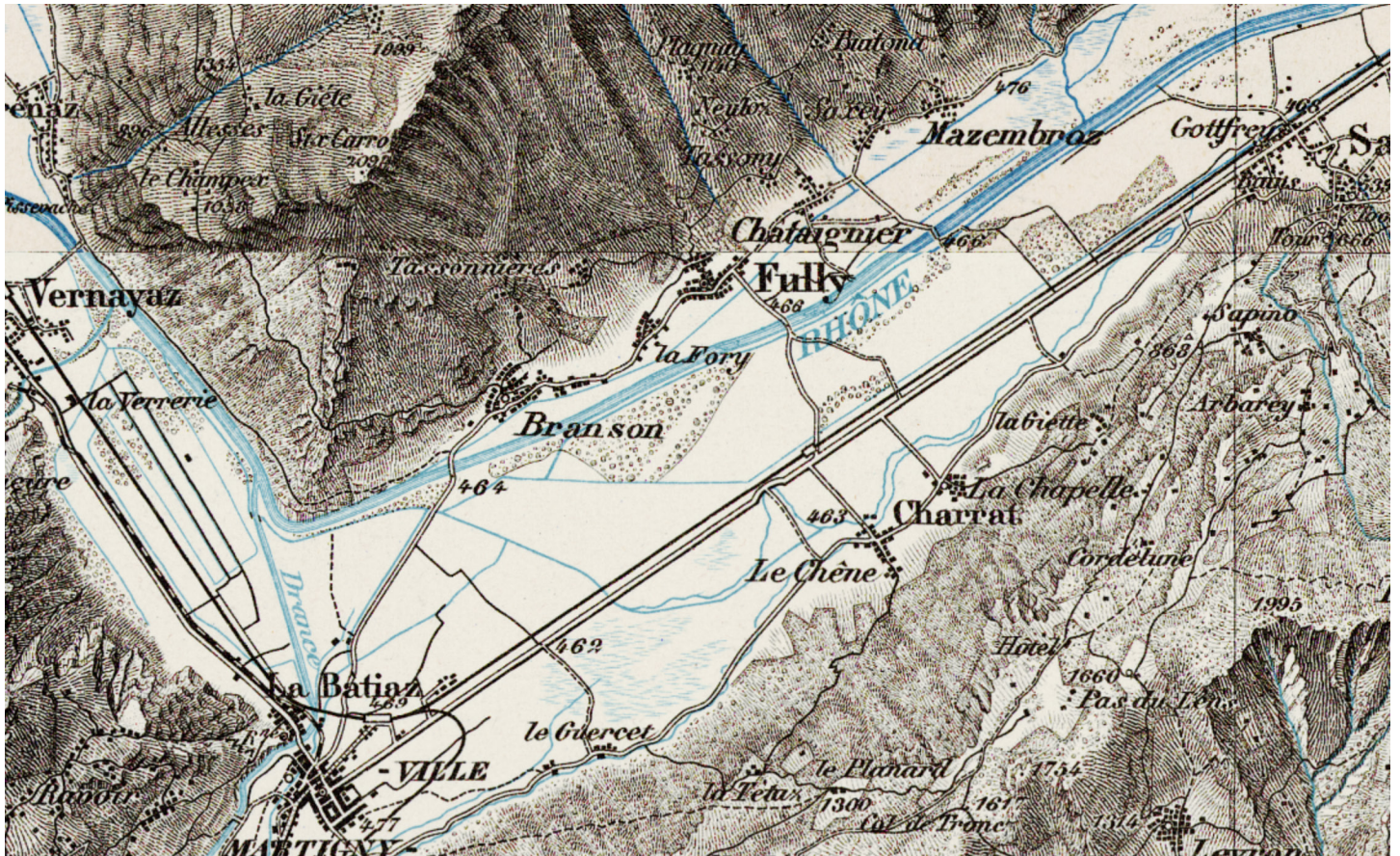
BEATRIZ KLETTNER SOLER, CAMARGUE 1920 (2022)

During the Valaisan Camargue of the 1920's, there was a sharp contrast between the field and the line. In towns such as Saillon and Riddes, and between Fully and Charrat, the plain was a landscape of water, forestry, and dunes, the Rhone and the trainline cutting through the landscape in parallel. The towns developed in safe distance form the river. Agricultural fields were scarce.



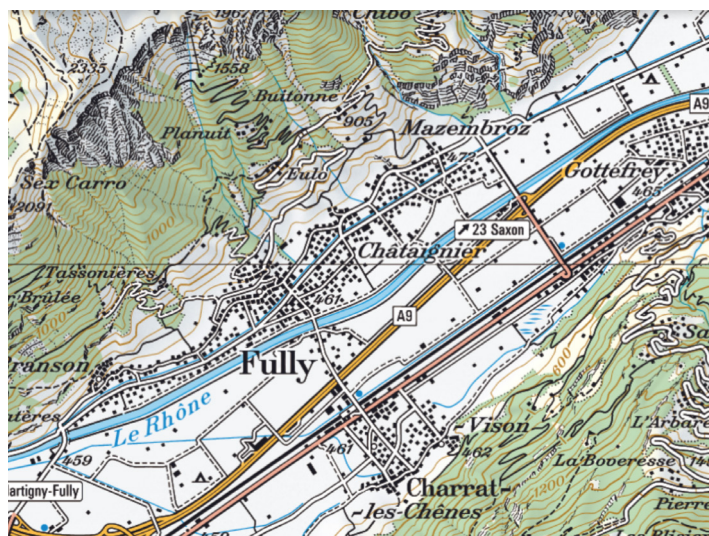
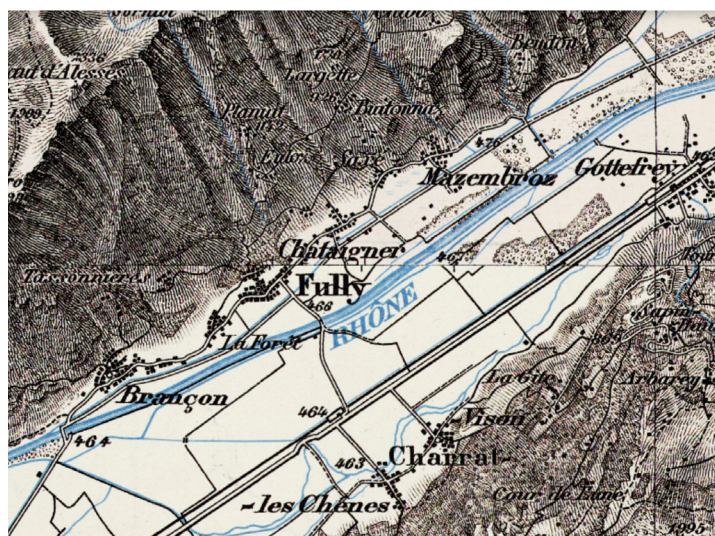
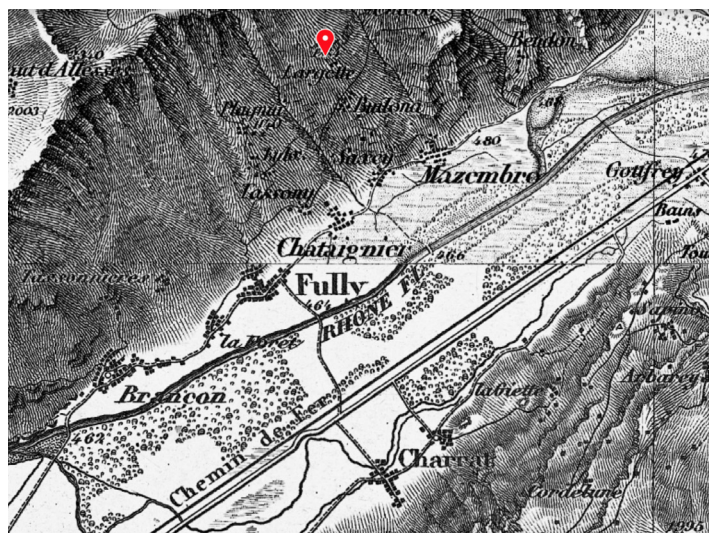
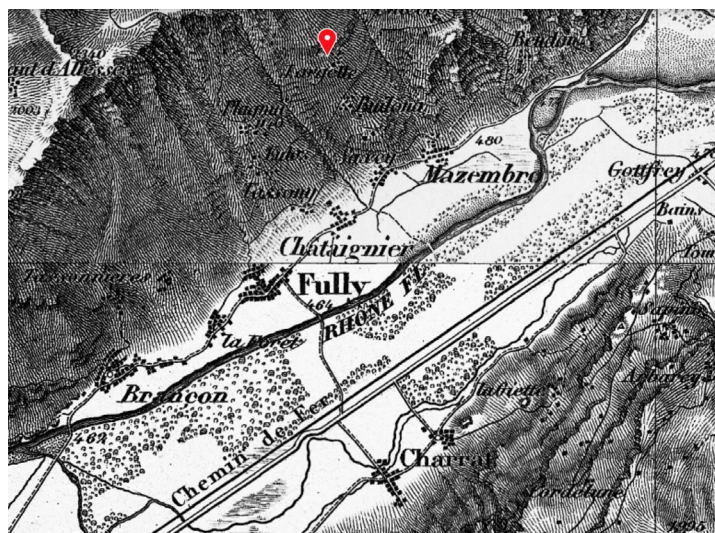
GOOGLE EARTH, FULLY (2022)

The commune de Fully is located at the precise moment where the river Rhone takes a turn. This geographical fact makes Fully the town in Valais with the highest risk of flooding, as well as the one that, when a flood occurs, is most impacted by. It is on the right bank of the river Rhône and is well known for its wines.



FREDERIC ROSSANO, FLOODSCAPES (2016)

The commune de Fully in the 1920's was still an extension of the mountain, not coming very close to the river. It had two main roads in T shape, one cutting through the town, and the other connecting it to the south to Charrat. It had a big forest, mostly of chestnut trees, and was very close to Les Gouilles de Gercet, which was another wetland and island zone between Charrat and Martigny.



SWISS TOPO, FULLY (1860)

SWISS TOPO, FULLY (1868)

SWISS TOPO, FULLY (1945)

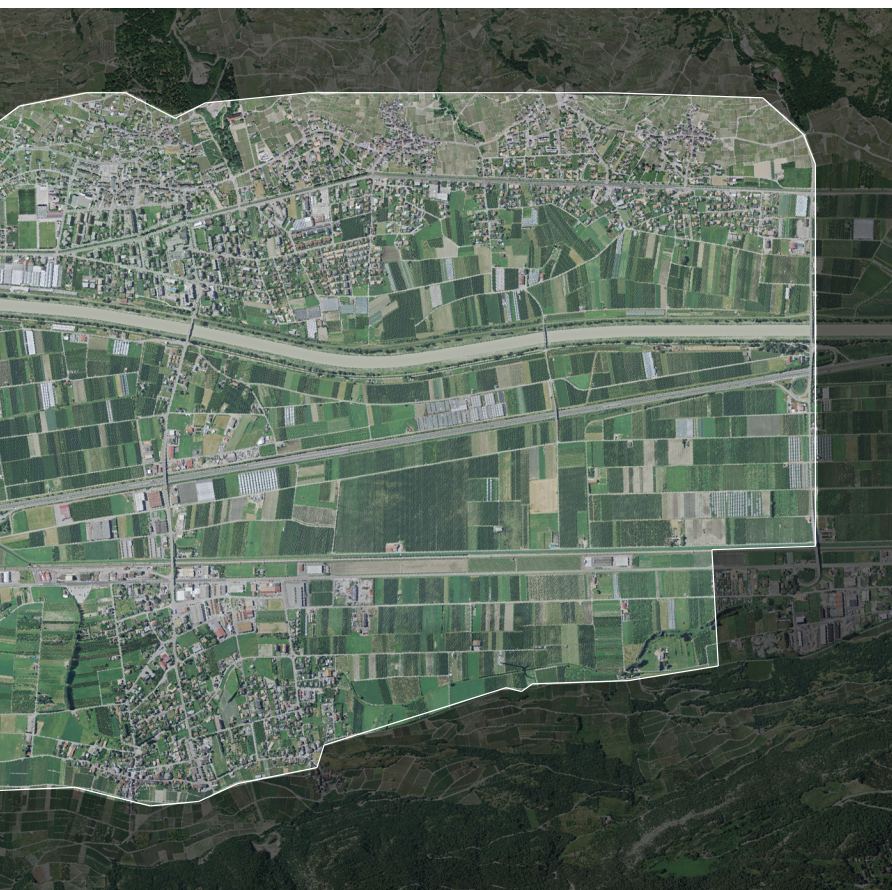
SWISS TOPO, FULLY (2018)

The development of Fully along the years from 1860 to 2018 is best defined as an urban sprawl that started on the edge of the mountains, still protected from the Rhone, and grew through the years closer to the river, where the protection from the water is not guaranteed. Despite known risks, housing projects have been built right behind river levees, on widely known flood-prone areas, and thus exposed to a risk of major damage in case of a dyke breach.

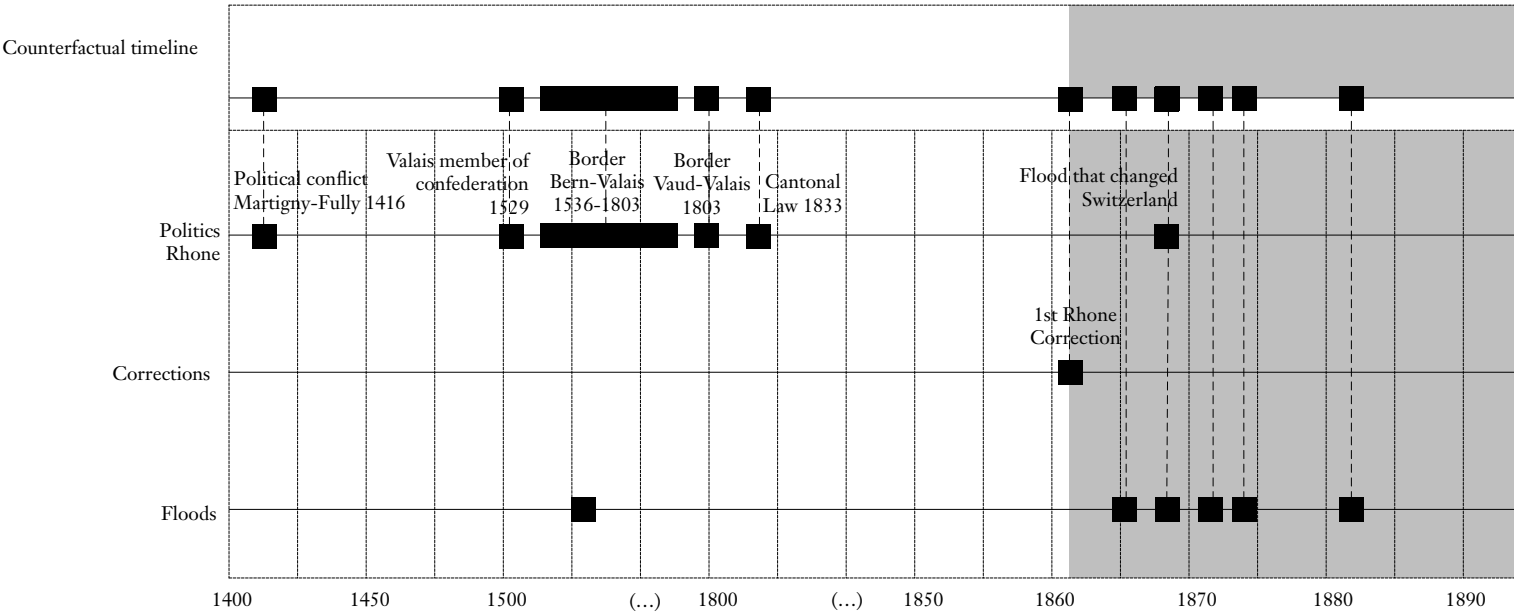


SWISS TOPO, ORTHOPHOTO OF FULLY & SURROUNDINGS (2022)

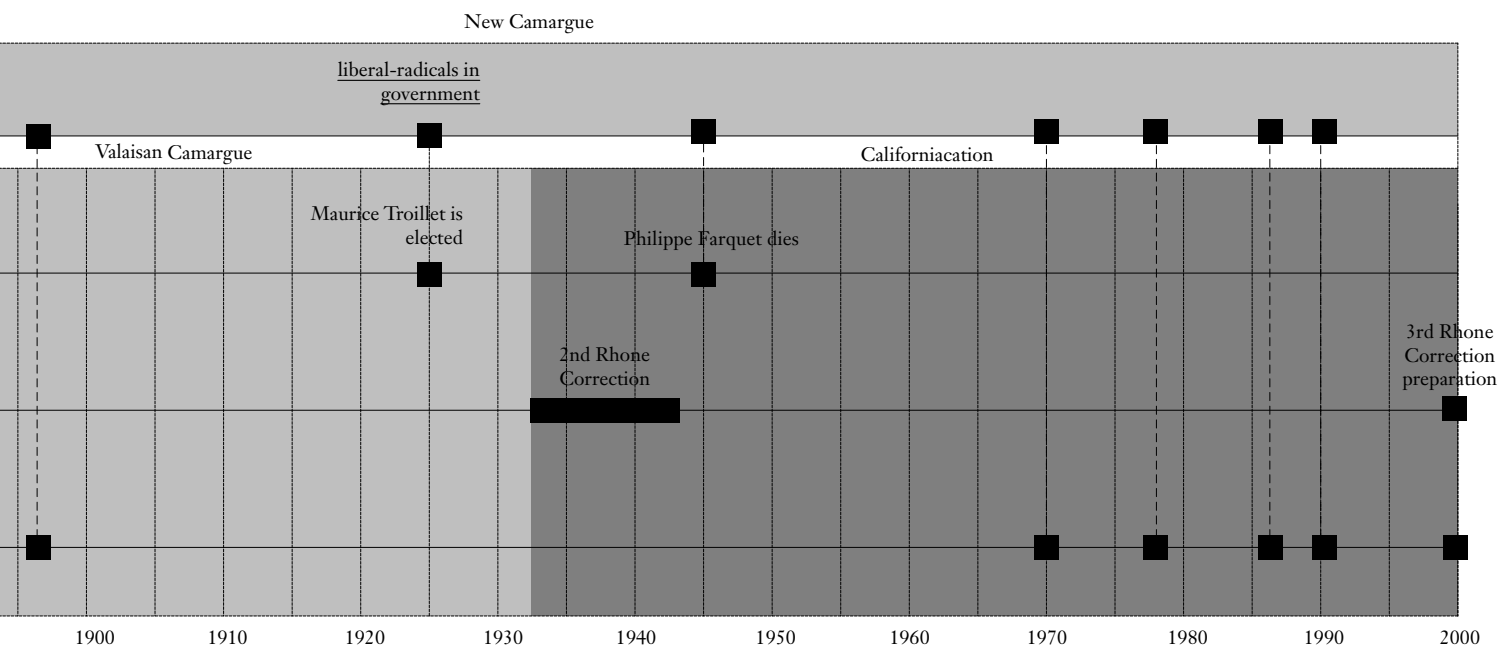
The site of the design phase will be the region of Fully and the fields at its border between Martigny and Char



rat, due to its relation to the past Camargue and its current dangerous relationship with the Rhone.



TIMELINE



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