



# The Häsener Luch – Use and Ecological Change

## Stakeholder Survey on Changes in the 20<sup>th</sup> / 21<sup>st</sup> Century



The EU-funded project LIFE Multi Peat aims to restore parts of the fen complex Häsener Luch (municipality of Löwenberger Land, Brandenburg). This is intended to improve water retention in the area, reduce greenhouse gas emissions, and enable the re-establishment of fen-typical flora and fauna. In order to extend the restoration measures to further parts of the Häsener Luch, alternative forms of fen management under wetter conditions are being explored in cooperation with local farmers.

In July 2023, a survey was conducted on the socio-cultural significance of the Häsener Luch for the local population. While local farmers already include many restoration measures in their project development, far less attention is currently paid to the perspectives and experiences of the non-farming population. Therefore, our study aimed to investigate personal experiences and existing knowledge about the history and development of the Häsener Luch in order to be able to include the perspectives of the local population in the project development.

### Methodological Approach

For this study, twelve qualitative, semi-structured interviews were conducted in early July 2023 with local residents in Häsen and landowners of the Häsener Luch. The interviews served to evaluate the significance of the Häsener Luch for the local population in the past, how they perceived the changes over the past decades, and what expectations and hopes the stakeholders have regarding the future development of the area. In addition, the interviewees were asked about their knowledge of the ecological importance of peatlands and what role current strategies and developments of German peatland protection policy play on the ground.

Each interview lasted between one and two hours, was subsequently logged and, if permission was given, recorded. The interviewees were selected according to the snowball system. This aimed to identify interviewees who own land in the Häsener Luch, have a special personal relationship with the area, are older and/or native Häsener,

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or represent relevant actors of civil society (e.g., local council, self-organized groups, and associations).

### Key Findings

- Although the fen complex of the Häsener Luch is considered less significant today, they served a variety of functions for the local population before extensive melioration measures were implemented in the 1970s. The fen complex was an important fishing spot, provided numerous opportunities for children and teenagers to play freely, and served as sanctuaries for animal and plant species that the residents of Häsen deemed particularly worth protecting.
- Not only the Luch area, but also the landscape in and around Häsen was characterized by numerous smaller bodies of water, which were attributed a high aesthetic and ecological value.
- The extensive removal of water from the landscape, especially since the beginning of the melioration measures, is seen as a significantly negative development that has greatly changed the original character of Häsen by most interviewees. The associated decline in biodiversity, particularly of fish and birds, is also perceived as a loss.
- Almost all interviewees would welcome it if the restoration project in the Häsener Luch helped to increase water retention in the landscape.
- Although the importance of water in the landscape is obvious to most interviewees, the role of peatlands in the context of climate change mitigation and adaptation is far less known. However, the restoration project in Häsener Luch has significantly increased the awareness.
- Transparent communication about the planned measures and ensuring long-term maintenance of the area are considered particularly important for continued support of the project.

## Overview of the Häsener Luch Fen Complex

The Häsener Luch, which extends over an area of about 120 hectares and is located in the districts of Gutengermendorf and Häsen in the municipality of Löwenberger Land (Oberhavel district, Brandenburg), is part of a larger fen complex. This complex is located in an elongated, roughly north-draining meltwater channel in the surrounding ground moraine landscape. The Luch is a representative example of a heavily drained and agriculturally used fen in northeastern Germany. Partial areas of the fen complex (53 ha, Häsen district) were placed under nature protection in 1953 and form the current project area of LIFE Multi Peat. Due to the lack of a nature reserve regulation or a management plan, the former protected species (including the great curlew, redshank, snipe, butterwort, orchid species) have largely disappeared today due to the ongoing drainage of the area. The vegetation shows only traces of the original fenland and can be described as heavily impoverished, alternating wet fenland grassland for the utilized part. Partial areas of around 20 ha in the south of the nature reserve have been owned by NABU Gransee e.V. since 2018. These areas have not been cultivated over the past decades and are therefore dominated by shrubs (including gray oak, elderberry) and trees (including black alder, ash, sand birch).



Overview of the fen complex Häsener Luch.

## Beginnings of Agricultural Use in the 17<sup>th</sup> Century

The early settlement of the town of Häsen can be traced back to the Bronze Age. However, after a major fire at the end of the 15<sup>th</sup> century, Häsen fell into disrepair and was not resettled until the mid-17<sup>th</sup> century. At this time, Jobst Gerhard von und zu Hertefeld acquired the then worthless fields of Häsen and encouraged population growth by settling Cleves farm workers in the area. This also marked the beginning of the reclamation and drainage of the Häsener Luch.

This was one of the first reclamations of the fenland and served as a model for later reclamations on the Rhin, Oder or Warthe. Theodor Fontane described it as “epoch-making for the cultural history of the Mark”. He also emphasized how the system of drainage ditches was planned and implemented at that time: On windless days, small pieces of paper were floated in the water to identify the direction of flow and watersheds. Despite the beginning of agricultural use, the areas of the Häsener Luchs remained damp to wet for most of the year, so that Fontane described crossing the Luchs via the then Kirchensteig as “wading” rather than “walking” (Theodor Fontane 1889: Five Castles).

## Economic Use of the Häsener Luch in the First Half of the 20<sup>th</sup> Century

At the beginning of the 20th century, most of the land on the Häsener Luchs was used for dairy farming and haymaking. The land was divided into elongated plots of around 1-2 hectares and was drained by adjacent drainage ditches. Eyewitness accounts indicate that the drainage system of the time was already quite effective. Although the areas were regularly flooded in winter, the many small ditches ensured that the water drained away

evenly in summer. Thanks to the use of horse-drawn carts, the land could be worked and used for agriculture in summer even when the water levels were relatively high.

**“In the past, everything was naturally drained. I can remember that. There was no year when our meadows back there in the western part [were too wet].”** (Interviewee #10, born in the 1940s)

**“Where the small ditches were, I would like to say, there was less water [in the areas]. But the [ditches] were also not so far apart.”** (Interviewee #11, born in the 1940s)

Areas with a thick layer of peat (up to 3.4 m, as of 1969), which were too wet despite drainage, were used for peat cutting. The cut peat served mainly as fuel for the neighboring distillery. Shortly after the end of the Second World War, however, peat cutting was discontinued. The slowly water-filling peat pits then developed into significant fishing spots. The presence of other natural bodies of water in the vicinity also contributed to the Häsener Luch becoming a highly valued fishing spot, for which an official fishing right was granted.

## Condition and Use of the Häsener Luch until the 1970s

In particular, some older residents of Häsen report nostalgically about the state of nature in the 50s and 60s. They rave about the beauty of the areas and the biodiversity that prevailed back then. From their perspective, nature was still “intact” and “beautiful to look at” back then.

### The Abundance of Fish and Birds

To this day, the abundance of fish in the peat pits and ditches in Häsen is described as legendary. Various eyewitnesses reported that the occurrence of fish such as crucian carp, sticklebacks or tench in the ditches was abundant. The occurrence of pike in the ditches was also remarkable, so that pike fishing (then with wire loops) has remained a popular pastime for many residents.

**“In the ditch that goes back there, we caught pike as children. We speared pike with the dung fork. We pulled out really big fish. And crucian carp. We pulled out tons of crucian carp for the chickens.”** (Interviewee #5, born in the 1960s)

The Luch area was also described by many older residents as a “feast for the eyes” or “wonderful nature”. Many aquatic plants gradually settled in the former peat pits, and the much more open areas of today’s NABU site provided a home for many animal and bird species. For example, black grouse and blackcock have been spotted on the Häsener Luchs site, countless lapwings, bitterns and grey herons have been reported on the meadows and marsh harriers, owls and otters have been observed hunting on the site.

**“There were a lot of birds here, a lot. And my husband knew them all because he made hay on the fields.”** (Interviewee #3, born in the 1940s)

Wend Graf zu Eulenburg-Hertefeld (1908-1986) also remembers the peat pits in his book "Erinnerungen an Liebenberg" as follows:

**“Old peat pits form ponds and small lakes here, where ducks, wild swans and other waterfowl bred in those days, and in autumn flocks of wild geese and cranes arrived on their journey south.”**

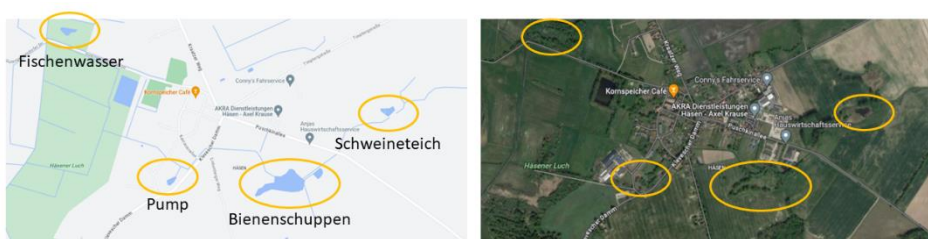
The diversity of butterflies, toads and frogs was also reported to be many times higher than it is today. Such biodiversity was also reported in the surrounding fields, where partridges, pheasants, hares, and field hamsters, among others, were reported to be very active.

### **Water, Water Everywhere**

Not only were the areas of the Häseener Luchs wet, but the rest of the fields in Häsen and the surrounding villages were also characterized by an abundance of water and water-holes. For example, the fields east of the Kraatzer Weg, the so-called Schäferwiesen, were also influenced by water levels close to the fields. Natural ponds such as the "Bienenschuppen", the "Pump" or the "Schweineteich" were fed by streams as well as smaller springs. The "Fischenwasser", another former peat pond north of the Gutengermendorfer Weg, formed another large open water area.

**“There were even more pools here. Right in front of the cowsheds. There were even fish in there. [...] And down here too, this pool at the ‘Bienenschuppen’ . [...] It was really beautiful here.”** *(Interviewee #3, born in the 1940s)*

**“Fuchs-Else down there, for example, too. [...] There was also water, water, water. Water holes like the Bienenschuppen down towards Bergsdorf. Those were huge water holes.”** *(Interviewee #5, born in the 1960s)*



Overview map of former water bodies (left) and current satellite image (right).

Due to the significantly colder and snowier winters in the past, the spring was characterized by a veritable snowmelt. The ditches filled up to the brim and sometimes even beyond. As a result, cellars in the village were flooded and fish were washed out onto the street.

**“As a child, I can remember, the ditch overflowed. Our backyard was all under water. You can’t imagine, the ditch is over two meters deep. It was after the snowmelt, so much water came that everything, our backyard, our cellar, everything was full of water. We always had water in the cellar, it was common.”**

**That's why our father always had a pump in there.**“ (Interviewee #5, born in the 1960s)

## **Sociocultural Significance of the Häsener Luch**

In addition to being used for haymaking and dairy farming, the Häsener Luch was also regularly visited by other residents. While ditches, peat pits and other water areas served as fishing spots in summer, the meadows, which were regularly flooded in winter, were ideal for ice skating. The Fischenwasser (approx. 2.5 ha) was used as an ice hockey rink. The other water areas in the village were also very popular, as the good water quality was ideal for swimming and children could build rafts there.

**“For example, in the Luch behind the reservoir, we went ice skating in the meadows every winter. The whole thing was under water. We went ice skating endlessly. It was ideal for us.”**  
(Interviewee #5, born in the 1960s)

Many of the interviewed residents also reported that today's NABU area and the many ditches held a special appeal for them as children and teenagers. They explored them in small groups and were able to get up to a lot of mischief down there, far away from the adults. Tests of courage were also held in the leech-rich fishing water to see who could keep their legs in longer.

**“At the ditch, we could hide nicely, there were the willows. A weeping willow hung over the ditch, no one saw us there. We had fun. This was our paradise here.”** (Interviewee #3, born in the 1960s)

**“I knew the NABU areas as a child. We used to go down there quite a lot and cut down trees and do things. So we did quite a lot in there, cut down trees and what not. [...] At any time of year, when we felt like it, we went in there.”** (Interviewee #5, born in the 1960s)

While much of the area was so swampy that it was difficult to access, most residents knew the area well and knew how to behave.

Furthermore, especially in the first half of the 20th century, the area was considered a rather mysterious place by many residents. Adults told stories of will-o'-the-wisps and voices coming from the peatland and tried to keep children away from it by telling them about ghosts that lived in the area and would draw the children in.

The "magnificent" and "beautiful" nature, which is often evoked by older villagers in particular, also prompted the two sisters of the Blei family to campaign for the protection of the land in the 1950s. "Tante Finchen" (Josephine Blei) and Berta Feldsch are still known throughout the village today as the guardians of the land. It is ultimately thanks to their tireless commitment that the land was protected as a nature reserve in 1953.

## Melioration of the Häsener Luch in the 1970s

While the Luch had been drained and used for agriculture for centuries, the industrialization of agriculture from the beginning of the 1960s under the Agricultural Production Cooperative (LPG) of the GDR and the subsequent melioration is perceived as a drastic change. As these areas continued to experience regular winter floods and summer hay harvests were often obstructed by high water levels, especially with the introduction of tractors, a more efficient drainage system was implemented during the melioration process. For this purpose, the smaller trench ditches were replaced by larger drainage ditches in the 1970s and additional drainage pipes were installed. The construction of shaft weirs and a sedimentation basin was intended to enable the fields to not only get drained but also irrigated. Furthermore, hedges and shrubs between individual field plots were removed to combine them and allow for more extensive cultivation. The use of industrial fertilizers and pesticides also increasingly shaped agricultural management.



Drainage ditches and a shaft weir between field plots in the Häsener Luch.

The effects and success of these measures are controversial among the residents and lead to very different assessments of the development in retrospect. While some residents praise that the melioration finally led to a "reasonable water management" and made the Häsener Luch more usable, many of the older residents criticized the measures as completely exaggerated and "devastating" for nature. They criticize that the melioration, through the radical removal of water, "really destroyed everything", and "did not make

anything better". They noted that it had never been too wet in Häsen, and that the ditches pre-melioration had been sufficient. There would not have been so much water to "fill all the new ditches".

**"I remember as a child when they made hay down there. They got stuck with the tractors. They really struggled to get those things out. [...] The meadows on the other side of the Kraatzer Weg were also full of water. From the street on, lakes everywhere, all full of water. In winter or spring, there was only water, water, water, the farmers had all problems to get on it. That's why the whole melioration was there."** (Interviewee #10, born in the 1940s)

**"The melioration was completely useless, it didn't make anything better, nothing at all. [...] What was the melioration for? We never had too much water, it was always dry. [...] They just did melioration because it was in the plan. [...] Practically it was pointless. [...] We never had too much [water]. That the fields were wet, that was not at all the case. Only the meadow was wet, but that was not so bad, that was just the way it was."** (Interviewee #3, born in the 1940s, in regard to the Schäferwiesen)

However, almost all interviewed residents agree that many of the measures were excessive and poorly planned. For example, some of them made fun of the fact that the workers hired from the Czech Republic laid the drainage ditches all the way up the mountain, even though there was no necessity for additional water drainage there.

**"I didn't want to say it. It was a damp squib. How could you lay a drainage on a mountain, where the water is already running downhill? That was money thrown away. They didn't need to do that. We said that back then. We laughed. That shouldn't have happened."** (Interviewee #11, born in the 1940s)

Also, the originally planned irrigation of the areas never worked. Neither shaft weirs nor reservoirs were ultimately used for irrigation in dry summer months.

Furthermore, it was criticized that the drainage did not work particularly well. That the water balance had gone awry due to the excessive measures. One interviewee reported that the drainage sometimes led to an increased accumulation of water adjacent to the Welsengraben. Others reported that the small ditches had drained more efficiently, while the drainage post-melioration did not manage to drain the water efficiently.





Wesengraben in summer 2023.

“Yes, and so instead of the ditches, drainages were installed that also never really worked. In the spring, when it was a very wet spring or a winter with snow and snowmelt, then the meadows near the Wesengraben were always heavily flooded for a long time. The first cut was then always gone for the farmers. That’s why the whole system never really worked after the melioration measures, like in the 50s, 60s and until the beginning of the 70s when my father also worked the meadows down there. [...] Through these melioration measures everything got a bit out of joint. The LPG later, they always had the problem that they couldn’t make the first and sometimes even the second cut in the spring towards summer, because the water didn’t drain away fast enough and the backwater in the Wesengraben lasted very long. [...]

Often the Wesengraben was also artificially dammed up because they wanted to store a retention capacity for the Havel. [...] The Wesengraben regulated everything here, when it was artificially dammed up, it’s normal that no drainage, and no drainage ditch works.“ (Interviewee #10, born in the 1940s)

“In the spring you can see, the meadows down at the Wesengraben, they are all under water, right and left. The drainage can’t handle that. And the small ditches are all gone, which absorbed the water and led it to the Wesengraben. That’s why they made the drainages earlier. [...] Sure, in the summer it’s dry, but in the spring the water stands, who knows how high. The farmers can’t get on it for a long time. [...] That wasn’t right with the drainages. Whether they were too weak or whatever...” (Interviewee #11, born in the 1940s)

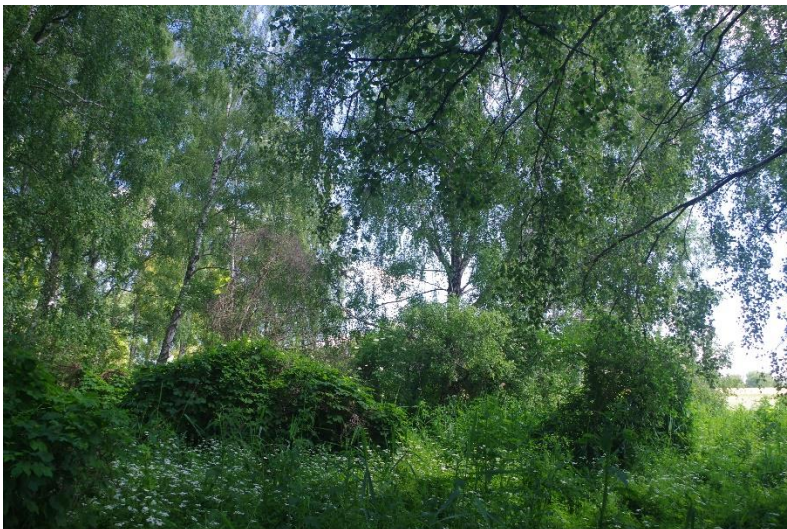
## Environmental Changes from the 1970s to Today

As previously described, many residents perceive the time of the LPG and the melioration as a time of great upheaval. In particular, the loss of species due to the melioration measures is described as very dramatic.

**“There were a lot of birds and animals in the areas. There were also animals that were not so common anymore. But suddenly they were all gone. [...] Not even a cricket could be heard anymore.”** *(Interviewee #3, born in the 1960s)*

Populations of animals, such as hares, partridges, or pheasants, experienced a dramatic decline due to the loss of their protective habitats, in particular hedges and shrubs. This loss also significantly decreased the diversity of butterflies, birds, and fish. According to the interviewees, the species occurring today are mainly deer, wild boars, beavers, buzzards, hawks, cranes, gray geese, and wild ducks. Raccoons have truly become a nuisance in the village.

As the Luch area continued to dry out, the open, aquatic vegetation was increasingly displaced by shrubs and trees. Occurrences of individual water plants such as the marsh iris or horsetail species can now be found almost exclusively along the Welsengraben.



In parts of the Luch area trees and shrubs have established post-melioration.

**“Everything is much more densely grown, much more densely. And very little water everywhere. Down here in the meadows, for example, when you drive to Klevesche (houses), on the right side, you could see water surfaces every now and then in the spring... as a child I can remember, you saw water surfaces everywhere. And today nothing, all just reeds and giant trees on it. And all overgrown and entangled.”** *(Interviewee #5, born in the 1960s)*

The loss of water in the landscape has been most noticeable for all villagers over the last few decades. Even though water runoff seems to have worsened on individual areas, as

described above, all the residents interviewed reported how the water areas in and around Häsen have become drier and drier over the years. The last 30-40 years in particular seem to have played a significant role here. A combination of drainage and climate change seems likely. The Luch areas, including the peat bogs, slowly dried out and became overgrown. Even the large Fischenwasser fell completely dry over the years. The remaining water areas in and around Häsen, which used to be described as "beautiful waters", also dried up completely and former springs dried up and the reservoir and nearby lakes lost considerable water depth, so that today there is hardly anything left of the landscape once described as rich in water.

**“There were also more pools here and they are all dry [...] It was really nice here and well, where the LPG farmed, everything was destroyed. They drained it, meliorated it and so, everything went to ruin. [...] Even the wells dried up, there was also a well down here. Everything is gone.”** *(Interviewee #3, born in the 1940s)*



Where water stood once, the Häseener Luch is now marked by dry soils.

**“But with the melioration, all of this became less. When the melioration came, you noticed, the meadows, there was no more water in them, everything became noticeably less, so all the flooded meadows that we always knew, that was all no longer the case.”** *(Interviewee #5, born in the 1960s)*

**“We definitely have much, much less water than we used to, I must say. All the holes, the small ponds, and lakes that we had around here, they are all dry. We played as children, fished, built rafts, and sailed around on them but there is nothing in them anymore. Everything is empty, all empty.”** *(Interviewee #5, born in the 1960s)*

## Current Use of the Häseener Luch

The areas, which used to be frequented by children, for fishing or by nature observers as an excursion destination, have increasingly lost their attractiveness and importance for the residents of Häsen over the decades due to the constant loss of water and overgrowth. Although the areas are still partly referred to as a ‘local recreation area’ of Häsen today,

they are mainly frequented by dog owners, as the road leading there, the Gutengermendorfer Weg, is not used much anymore.

## Existing Knowledge about Peatlands and Attitude towards Rewetting

Existing knowledge about moors and attitude towards rewetting

The older residents in particular are very aware that the Häsener Luchs peatlands are of great ecological importance. Some of the residents interviewed also stated that they had occasionally seen reports or documentaries about restored peatlands on television. However, at the time of the interview, most of the residents were hardly aware of the overall ecological importance of peatlands, particularly due to their contribution as a source of greenhouse gases. Many stated that they first became aware of this problem through our project and that since then they have become more aware of reports on peatlands on the radio or television and have at least been marginally aware of the debates on the rewetting of peatlands. Concrete political measures such as the German government's peatland protection strategy or the Natural Climate Protection Action Program, on the other hand, are not known.

Due to the clear perception of the drying out of the landscape, almost all of the residents interviewed were very positive about our project and would very much welcome it if it led to more "water in the landscape" again. This is also reflected in the fact that some interviewees emphasized the higher water levels in spring 2023 as something very positive and special:

**"We were delighted this year when we saw that it was wet again in the Luch. This year there was water again because it was wetter. But well, now it's all gone again."** (Interviewee #3, born in the 1940s)

**"In the spring, the Welsengraben was full to the brim, really full to the brim. It was beautiful."** (Interviewee #5, born in the 1960s)

Despite the fundamental support of the project, some of the interviewees doubt how realistic the targets are due to the significant changes that the areas have undergone over the last decades. The hope of contributing something to climate protection is also met with skepticism. Some interview partners questioned whether the NABU project, like many other restoration projects, could really bring about a sustainable, long-term change, for example whether the areas would continue to be maintained after the project has been completed, or whether a lot of money would be spent in the short term.

**"So I'm really curious to see whether the company will succeed. I don't actually think it's bad at all. I think it's good that something is happening in this respect. It doesn't harm anyone."** (Interviewee #5, born in the 1960s)