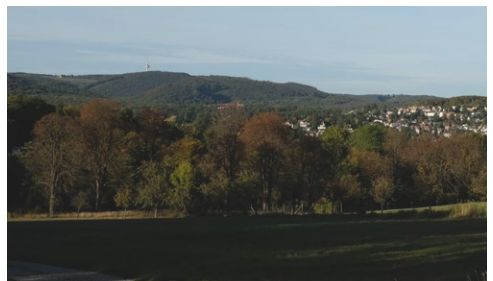
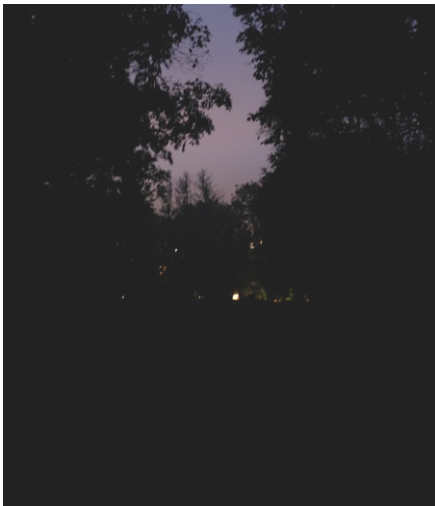
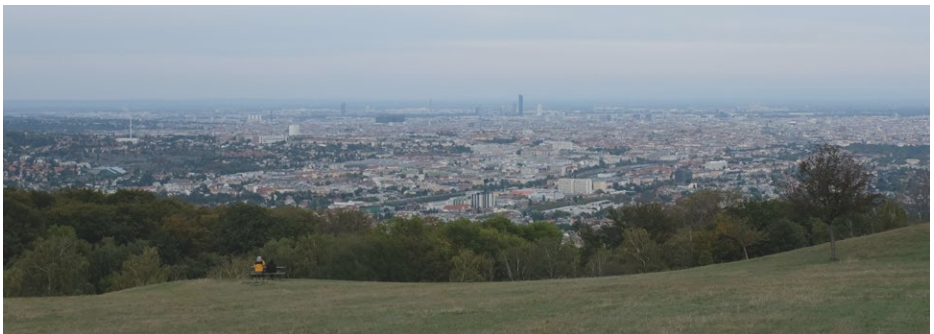


LAINZER TIERGARTEN

Collected Information and its History

Veronika Behawetz
Annika Böcher
Chang Dang Thuy
Jessie Gao
Mona Steinmetzer





LAINZER TIERGARTEN AND THE IMPERIAL FAMILY

The first written record of a „Thier- und Saugarten“ near Hütteldorf as a hunting ground dates back to 1457. Almost a hundred years later, in 1560, Emperor Ferdinand I. bought the Auhof, a manor at the northern edge of the future Tiergarten, and the surrounding forests. He built a wooden fence around his new property to enclose his private hunting ground.

In 1755 Empress Maria Theresia gave away the ancient Habsburg family property to the state, but the shooting right still belonged to the imperial family. A few years later the Empress ordered that the wild boars need to be extirpate in the area around Vienna because of the damage caused by them. But as the nobility of Vienna insisted on a hunting ground to pursue their passion for hunting, the planning for a locked „Tiergarten“ began.

Throughout the following years Emperor Josef II. acquired more hunting rights for the imperial court in other parts of the Tiergarten. To secure this property a first Wall of Stone was built between 1782 and 1787. At that Time, the Tiergarten basically had the same dimensions as today. In 1849 a new hunting law was passed (the so-called Reichsjagdgesetz). Now it was no longer allowed to hunt on someone else's ground.

Because of the donation of Maria Theresia in 1755 the Tiergarten was owned by the state, the imperial family was therefore no longer allowed to hunt animals.

The solution was „Hofärarisches Eigentum“: this means the area is property owned by the state, but the imperial family still has the right to use it how they wish.

The Hermesvilla in the southern part of the Tiergarten got erected by Franz Joseph I. of Austria and was completed in 1886. It served as a refuge for his wife Elisabeth.

After World War I and the downfall of the monarchy the Tiergarten was opened for the population of Vienna to collect firewood. Later the Tiergarten became property of a fund for war affected people (Kriegsgeschädigtenfonds) until 1937.

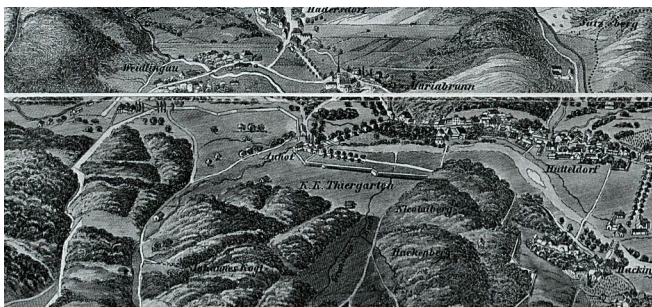


Sketch of the imperial tiergarten with its dimensions like in the Franziszeischer Kataster

[https://www.1133.at/
document/view/id/839#&-
gid=1&pid=1](https://www.1133.at/document/view/id/839#&-gid=1&pid=1)



Forst- und Landwirtschafts-
betrieb der Stadt Wien,
[https://club.wien.at/
magazin/100-jahre-lain-
zer-tiergarten/](https://club.wien.at/magazin/100-jahre-lainzer-tiergarten/)



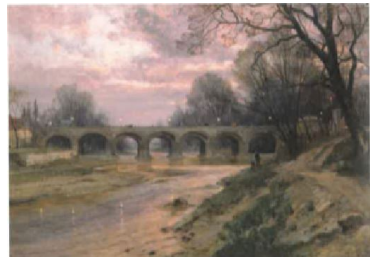
Historical drawing
of the „K.K. Thier-
garten“ and the
villages nearby

LANDSCAPE AROUND VIENNA IN PREINDUSTRIAL TIMES 1770 - 1820

Between 1773 and 1781 the city landscape of Vienna was precisely drawn. The austrian monarchy as well as the viennese citylandscape were initiated by Maria Theresia in the year 1764. It took 23 years to finish the topography drawings of the Josephinische Landesaufnahme, 570 000 squarekilometers of the viennese landscape were recorded. Those measurements were taken to get an overview of the different landowners as well as of the landvalue in order to create a fair and consistent taxsystem. At the end of this project there were 2 628 map sheets in the scale 1 : 2 880.

Detail of the Josephinian Land Survey, area of St. Veit.

<https://www.1133.at/document/view/id/617#&-gid=1&pid=1>



Painting of the Wienfluss.

Umwelt Stadt: Geschichte des Natur- und Lebensraumes Wien;
Karl Brunner

Survey Work: „Zöglinge der K.K. Forstschule Mariabrunn“
1867, Franz Kollarz, Farblithographie.

Ökosystem Wien: die Naturgeschichte einer Stadt,
Berger, Ehrendorfer, S.226



Beginning with the modern age until the medieval times the viennese citylandscape was divided into forrest, agriculture and a wide field of waterareas. In the 1900s the population increased which caused an immense development and spreading around the city center of Vienna. Between 1770 and 1820 there was a huge increase in street and house development.

If one compares Vienna with other european cities in the 1800s to mid 1900s one can see an enormous difference in correlation with nature. The city of Vienna always had a strong bound to the Wienerwald and its enrichments.

1775 the Linienwall was erected, which is nowadays the Gürtel. The Wienfluss was for the citydevelopment very important, because it can be used as an energyproduction as well as a ressource by itself. The Danube is also very important in the viennese history, since the north and the south was splitted for a very long time the development of the city was also different. ¹

1

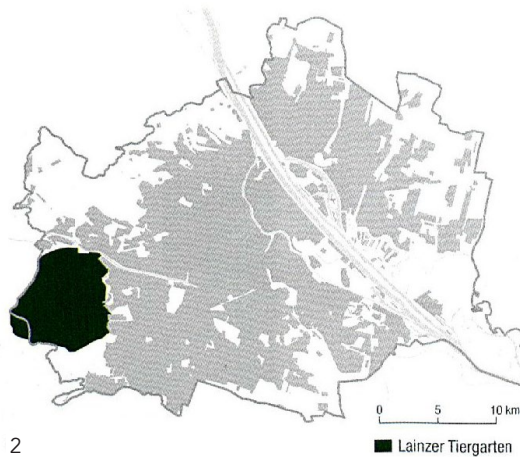
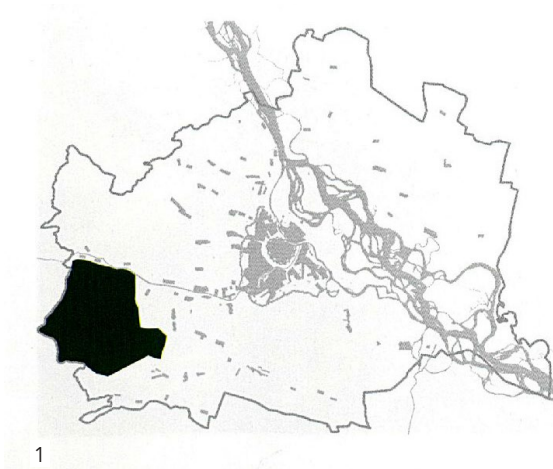
ÖKOSYSTEM WIEN LANDSCHAFTEN

Die Landschaften um Wien in der vorindustriellen Zeit 1770-1820



Josephinian Land Survey.

Umwelt Stadt: Geschichte des Natur- und Lebensraumes Wien; Karl Brunner



Area of Lainzer Tiergarten in 1790 and 1990.

Umwelt Stadt: Geschichte des Natur- und Lebensraumes Wien; Karl Brunner

With its 2,500 hectares, the Lainzer Tiergarten encompasses just under 6 percent of Vienna's urban area or twelve percent of Vienna's green belt. Compared to the state of 1790 (1), he lost some of his size in 1990 (2). In the inter-war period, the settlement Friedensstadt was built near the hospital Lainz in the southeast. 1955 the Westautobahn was build through the northern part of the Tiergarten, as a compensation land the city of Vienna bought more land in the south and amplified the wall into the southwest.

Old names of field sectors still remind us of former landowners: Johannserwald, Deutschordenwald, Schottenwiese, Jakoberwald, Laurenzerwald, Dorotheerwiese were owned by fraternities, Inzersdorfer, Leopoldsdorfer and Perchtoldsdorfer Forest were in the possession of the respective communities.

Landscape of
Lainzer Tiergarten.

Umwelt Stadt: Ge-
schichte des Natur- und
Lebensraumes Wien;
Karl Brunner







THE HISTORY OF THE WIENFLUSS

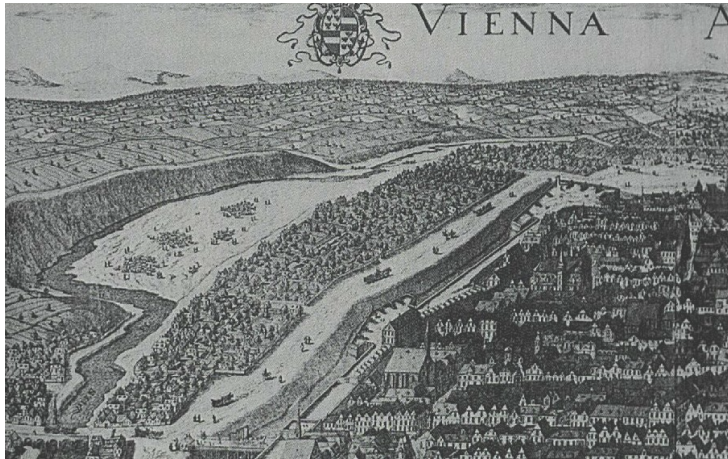
The Wienfluss has its source in the Wiener Wald, which is located four miles in the west of Vienna. Since the roman times the Wienthal was populated in the summer seasons. In the 13th century the Wienfluss was used to spin the mills in the river. At this time the river had a wider width and a lot of arm channels. At 1211 in the document of „Leopold des Glorreichen“, he says, that at the inner districts, at the „Kärntnertor“ the soil of the Wienfluss is more sandy than the artificially made channels for the mills, and it should not be seen as a border.

There are a lot of rivers, which are springing up of the Wienfluss itself; the Lainzer Bach, the Weidlingbach, the Gablitzbach as well as the Mauerbach.¹

At the middle of the 17th century the Wiener Wald was in an untouched state and the water quality was very clean, the fishery had here still the possibility to create a frame for their landlords. The river often splits up into wide arm channels. At about 1500 there were two main channels, whereas small ponds were developed.

In the 18th century there were a lot of changes taking place in the area of the Wienfluss. Trough the construction of the Wienerwall, which is basically an area all around the inner center of Vienna, in order to get fresh air into the city. Nowadays this circle around Vienna was reconstructed to today's Gürtel. Trough the blooming villages around or better said before the city. The water from the Wienfluss was used, the shortage of fresh water got quite urgent, therefore pipes which were leading to the city were erected.

1 [https://de.wikipedia.org/wiki/Wien_\(Fluss\)](https://de.wikipedia.org/wiki/Wien_(Fluss))



Historical drawing of the Wienfluss.

Umwelt Stadt: Geschichte des Natur- und Lebensraumes Wien;
Karl Brunner



Wienfluss,
Karlskirche in the
background
-1822

[https://de.wikipedia.org/wiki/Wien_\(Fluss\)#/media/Datei:Wienfluss-1822.jpg](https://de.wikipedia.org/wiki/Wien_(Fluss)#/media/Datei:Wienfluss-1822.jpg)

THE QUALITY OF THE WATER

The inhabitants were aware of the mischief and the danger of the health, especially if one was living near the river. There were a lot of channels containing sewerage as well as cloaca, because the Wienfluss was used to wash away all the bad products. With the help of rain the rivers were often flooded. The grid of the river channels is spread out due to its wide suburbs. With time the ground area also got covered by the suburban infrastructure, whether by streets and their pavements. But this did not solved the problem at all, because the rain has no more space to get into the ground.

The industrial zones contributed to the pollution of the river, whereas a lot of them do not add to the pollution, but still it was getting worse. A lot of those companies as well as single family homes were storing dirt beside the river, when a flood came the dirt was carried to the next spot. Due to the lack of access to running water, the area was not only unpleasant but also an healthissue of the passerbies, especially in the summer when the water evaporates.

A security was also lacking, which caused that the houses were built unevenly. There already existed a construction border, where the territories were divided, but still without observation buildings got erected on forbidden spots around the river. As well as the river bedding was left in a chaos, since no one felt responsible for it. This circumstances led to the point, that everyone built bridges or even crossings by themselves, where they liked them to be. This caused a very undefined and unclear city unity.

„Allmähig sank aber die Zahl derselben; die Seuche schien Anfangs September bis auf einzelne Fälle erloschen; vom 17. September an ereignete sich sogar in dieser ganzen Gegend kein Todesfall an Cholera bis zum 25. September, wo sie ganz plötzlich mit ausserordentlicher Heftigkeit wieder auftrat. Namentlich suchte sie jetzt Opfer in Häusern, welche in den früheren Monaten verschont geblieben waren. Dies gilt besonders von den am Wienfluss neben einander stehenden Häusern Nr. 919, 816, 817 und 818 (IV., Wienstrasse Nr. 33, 35, 37 und 39), welche alle vier zugleich am 25. September ihre ersten Todesfälle hatten und welche sammt Nr. 918 (IV., Wienstrasse Nr. 31), welches schon am 3. September einen isolirten Todesfall gehabt hatte, an diesem ersten Tage

des plötzlichen Ausbruches 7 Personen verloren. Vom 23. September bis 1. October, also binnen 6 Tagen, starben in diesen 5 Häusern 27 Personen an Cholera, während in der näheren Umgegend bis zur Lumpertsgasse (Kettenbrückengasse) und der Neu-Wiedner-Hauptstrasse (Margarethnerstrasse) nur 5, darunter ein neuerlicher Fall in den Senkgrubenhäusern der Schmidgasse (Mühlbachgasse), in der ganzen übrigen Vorstadt Wieden nur 3 Personen starben. Am 7. October ereignete sich der letzte Todesfall in dieser kurzen Häuserreihe, welche im Ganzen 31 Leichen hatte.“¹

1 <https://www.1133.at/document/view/id/869>

Historical Wiental

<https://www.wien.gv.at/stadtentwicklung/projekte/wiental/>



Wienfluss with the view into the 13th district.

<https://www.radlobby.at/wien/der-wienfluss-weg-eine-oeffentliche-strasse>

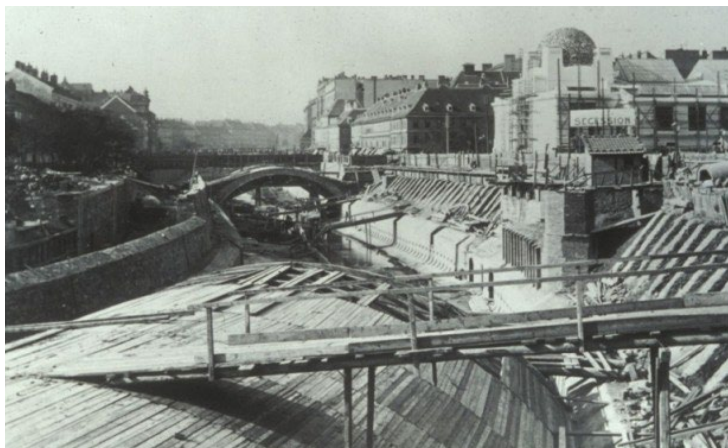
REGULATION OF THE WIENFLUSS

1898 was the regulation of the Wienfluss in the inner districts, the river got covered by the city. The concept was developed by Josef Maximilian Petzval, he invented the idea of the river which runs beside the metro as well as the arching of the river. 1862 was a catastrophic flood and afterwards the project got realized. ¹

1 [https://de.wikipedia.org/wiki/Wien_\(Fluss\)](https://de.wikipedia.org/wiki/Wien_(Fluss))

Regulation of the
Wienfluss near the
Karlskirche
- 1897–1898

[https://de.wikipedia.org/wiki/Wien_\(Fluss\)#/media/Datei:KarlsplatzEinwoelbung2.jpg](https://de.wikipedia.org/wiki/Wien_(Fluss)#/media/Datei:KarlsplatzEinwoelbung2.jpg)



Regulation of the
Wienfluss near the
Karlskirche

[https://de.wikipedia.org/wiki/Wien_\(Fluss\)#/media/Datei:KarlsplatzEinwoelbung1.jpg](https://de.wikipedia.org/wiki/Wien_(Fluss)#/media/Datei:KarlsplatzEinwoelbung1.jpg)

WIENFLUSS NOWADAYS



Wienfluss near
Auhof



View from the
bridge to trainsta-
tion Hütteldorf

LAINZER TIERGARTEN AS A NATURE RESERVE

At the suggestion of Reichsjägermeister Hermann Göring, the Tiergarten was declared as a nature reserve in 1941. During the war the meadows were used for herds of cattle and there was more agricultural use to be able to feed the people of Vienna.

After the invasion of the Red Army in 1945, the infrastructure was almost completely destroyed and the animals were almost eradicated and recovered only slowly.

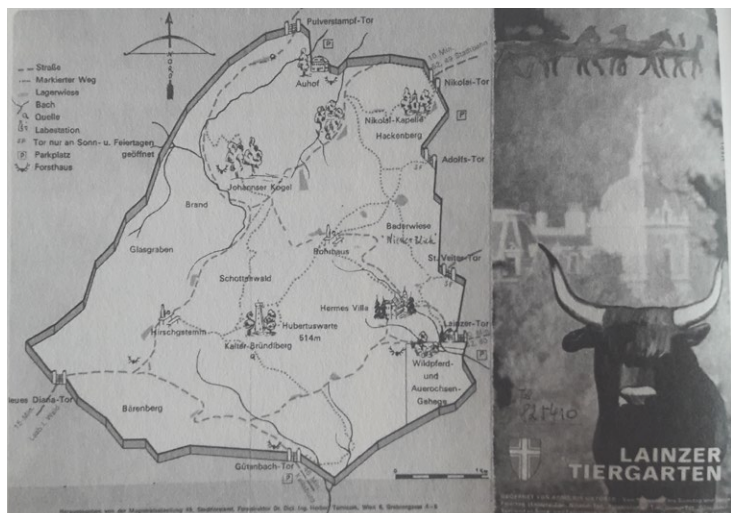
In the 1950s tourism increased and the first tavern „Rohrhaus“ was opened. The „Hirschgstemm“ followed in 1963.

The oak forest „Johannser Kogel“, a part of the Tiergarten which was left almost untouched, became a natural monument in 1969.

Since 2008 Lainzer Tiergarten is an European protected area. The current nature protection ordinance also is from the year 2008, it ensures the preservation of the Lainzer Tiergarten in its current form. Nowadays the wildlife preserve Lainzer Tiergarten is a highly frequented park. People can go there for hiking and leisure activities, but the nature and the forests are strictly protected.

Lainzer Tiergarten
with its borders
in the mid-20th
century.

Lainzer Tiergarten einst
und jetzt, Hermann
Prosinagg, S. 108





Deer inside the
Lainzer Tiergarten.

<https://www.stadt-wien.at/freizeit/ausflugsziele/tiergarten-tierparks/lainzer-tiergarten.html>



Lainzer
Tiergarten -
A place for leisure
activities.

THE WIENERWALD

The north-western part of the Vienna Woods has a hilly and gentle landscape, the highest peak is about 500 metres. The subsoil of this part of the Wienerwald consists of marls, clay shales and sandstones. The soils are often heavy and deep soils.

The parts of the forest sloping down towards the Danube are characterized by deposits and erosion effects of the Danube. Due to the succession of warm and cold periods, typical terrace landscapes were created on the Danube, which are now used as wine-growing areas. There are predominantly deciduous forests - oak-hornbeam, beech, fir and red beech forests.

The south-eastern part of the Vienna Woods has more carbonate in its soil. The soils are often dry, nutrient-poor and shallow and the bedrock is lime or dolomite.

In comparison to the north-western Wienerwald the landscape is rugged and steeper, with a highest peak of about 900 metres.

In particularly dry areas black pine, black pine beech and downy oak forests, otherwise sessile-hornbeam and red beech forests are growing.

A striking type of wood is the black pine. By nature, it grows only in small areas on rocks and screes and was planted especially in the 18th and 19th centuries for resin extraction.

As the western part is influenced by Atlantic, the summers are cooler and the rainfall is up to about 1 000 millimetres per year, the eastern part continental climate with warmer summers and rainfall up to about 600 millimetres per year.

The Hills of the Wienerwald, Vienna in the background.



CLIMATE ZONES

Geologically speaking, the Lainzer Tiergarten is located in the flysch zone. Characteristic are sandstones and marls, heavy, clayey soils and numerous streams and ditches.

Lainzer Tiergarten lies in the border area of 2 climate zones:

Pannonian climate in the east (typical are high summer temperatures and relatively little precipitation), and oceanic climate in the west (typical are low average annual temperatures and higher annual precipitation).

FORESTS IN LAINZER TIERGARTEN

The oak-hornbeam forest: it predominates in lower elevations and is a light forest type. It consists of oaks, hornbeams, rare wild fruits (wild cherry, dewberry, Lathyrus) and ground plants (lily of the valley, liverwort). The old, often hollow oak trees are the habitat of many animals (woodpeckers, tits, bats, beetles).

Acidic oak forest: its soil is covered with a lot of moss

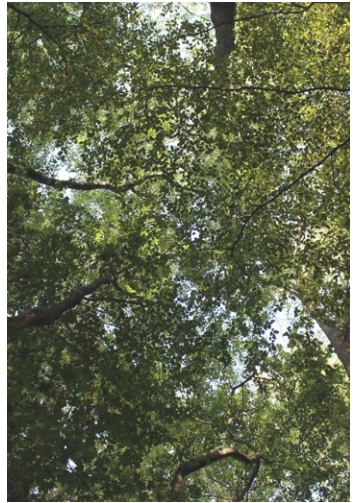
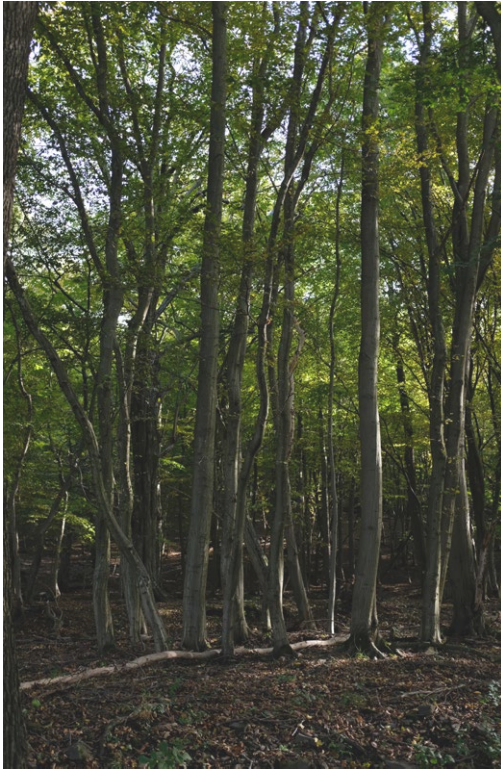
Beech forest: can be found in the western area of the Tiergarten.

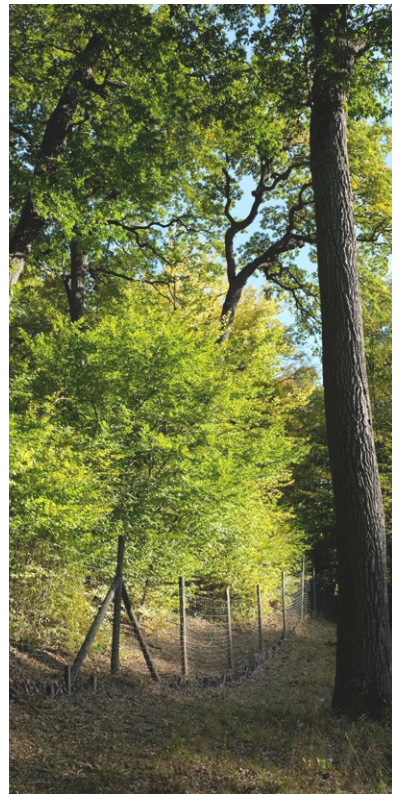
Alder-ash and Bedstraw-oak-hornbeam forests: located along streams, one can find Tufa sources, Gelbbauchunke (frog), Alpenkammolch (frog), the deadwood inhabiting beetle species large oak beehive, weevil, alpine goat, scarlet beetle and the violet-blue root-knot beetle.

Soil-Sour Oak Forests: they occur on nutrient and lime-poor rock. The ground is covered with a noticeable amount of moss and there are hardly any flowering plants. The oak trees have often grown bizarre and remain comparatively small.

Beech Forest: occurs in wetter and higher positions of the western Tiergarten. In summer, the beech trees form a very dense foliage that barely lets in light to the lower vegetation layers. Therefore, there are hardly any shrubs and soil plants here. The thick layer of fallen beech leaves is the habitat for small animals in autumn and winter.

Johannser Kogel: an especially protected forest area in the north-western area of Lainzer Tiergarten. The following forest species occur in the natural forest reserve: Oak and hornbeam forest in sunny locations, Beech forest on shadow slopes and Field maple, ash, oak and hornbeam special forest communities in hilltop locations. The centerpiece of Johannser Kogel are the 200- to 400-year-old oaks.







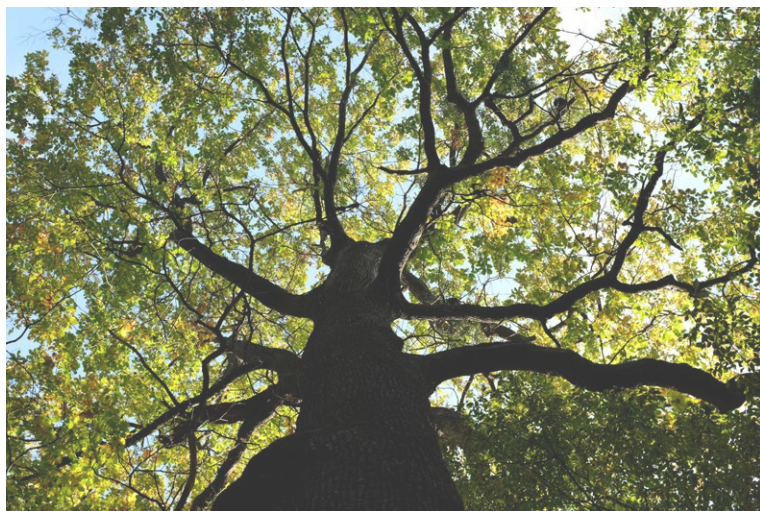


MOST OCCURRING TREE TYPES

Oak trees: very Common everywhere (but some species are threatened) They often mix up themselves to create hybrids. They are useful for humans to create hardwood timber for furniture and architecture, wine barrels, for ink and tanning leather, and acorns are used for flour. The oaks are also a very important component in natural hardwood forests, they provide a living space for truffles, mushrooms, flycatcher and nut-collecting little animals.

Beech trees: can be found everywhere. they are cultivated throughout Europe and got spread due to human activities and agriculture. Beech trees are monoecious, both male and female at the same time. They are able to grow on a wild range of soil. Characteristic for them is a large canopy, it casts a lot of shade and a lot of leaves fall as well - which enriches the soil. They are also useful for humans because they provide great firewood, are used to smoke food like ham and beer, and to create furniture framing, floors, plywood, and much more. Lainzer Tiergarten. The following forest species occur in the natural forest reserve: Oak and hornbeam forest in sunny locations, Beech forest on shadow slopes and Field maple, ash, oak and hornbeam special forest communities in hilltop locations.

The centerpiece of Johannser Kogel are the 200- to 400-year-old oaks.





THE VIENNESE LANDSCAPE NOWADAYS

Approximately four percent of the Wienerwald is located inside the city of Vienna, a third of it belongs to the area of Lainzer Tiergarten. The size of Lainzer Tiergarten is about 2.450 hectare. It contains very old trees, which are often even protected by fences, for example at the Johannser Kogel.

Vienna is the only city in Europe who has this close access to forrests. The area of the Wienerwald belongs to the biosphere park since 2005. The Wienerwald amounts 17 percent of whole Vienna, and is therefore an enrichment for the air and is very important to fight against the pollutionproblem. The treespecies that appear the most are redbeech, oak and european hornbeam. There are a lot of creeks, which among other things also rins into Johannser Kogel, the enfenced part of the Lainzer Tiergarten. A lot of them just disappeared by the development of the city as well because of regulations. In the past the Wienerwald was not only a source for energy and relaxation, but as well for nourishmentproduction. Already in early times some parts of the forest were cleared, so nowadays we have a lot of meadows surrounded by the forest. The Wienerwald has a very diverse landscape - hilly and flat areas, forrest and meadows, rivers and rocks. Nowadays the meadows are belonging to the endangered ecosystems.





IS THE WIENERWALD ENDANGERED?

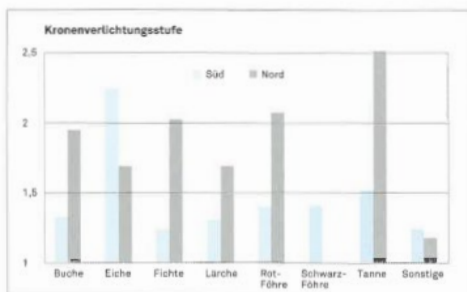
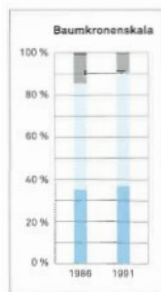
The extinction of the forest due to the emission and pollution was created by mankind, this information was spread in the news in the seventies. Observation and measurements have been taken and regulations were made, for example a speed limit at the highway. Due to the tool of infrared pictures, taken from above, the forest condition of the Wienerwald from 1991 to 2000 could be observed. One can see the condition of every single tree, which makes the whole research far more easier. The trees which are closer to Vienna and the city air, showed less density and a less developed treecrown. Especially the treecrowns in the Wienerwald next to the 13th, 16th, and 19th district are more translucent than those of the trees next to the 23rd district.

Bei der Auswertung der Luftbilder wird der Zustand der Baumkronen nach einer fünfstufigen Skala beurteilt:

- Stufe 1 „vital“
- Stufe 2 „beeinträchtigt“
- Stufe 3 „krank“
- Stufe 4 + 5 „absterbend“ bzw. „tot“

Wie die Graphik zeigt, waren Anfang der 1990er-Jahre im Wiener Stadtgebiet die Bäume des Wienerwaldes zu 90 Prozent als „vital“ oder zumindest nur als „beeinträchtigt“ zu bezeichnen, zudem war im Verlauf der zuvor vergangenen fünf Jahre ein leichter Trend zur Verbesserung der Kronenzustände zu beobachten.

Durchschnittlicher Schädigungsgrad der verschiedenen Baumarten im südlichen und nördlichen Teil des Wienerwaldes (1991).



Trough the evaluation of the infrared areial images of the Wienerwald one can see the different conditions of the treecrowns, which are basically divided into five different steps. As one can see in the diagramm, 90% of the treecrowns are vital or at least impeared. In general one can say that the deciduous trees are less affected than the needle beams.¹

The Wienerwald also has two different kinds of soil, in the south of the Wienerwald there is more carbonate in the soil, which causes a higher permeability to water than in the north.

All in all one can still say, that the Wienerwald is in a relatively good health condition. This is really important, especially if one considers that the Wienerwald is the green lung of Vienna.

1

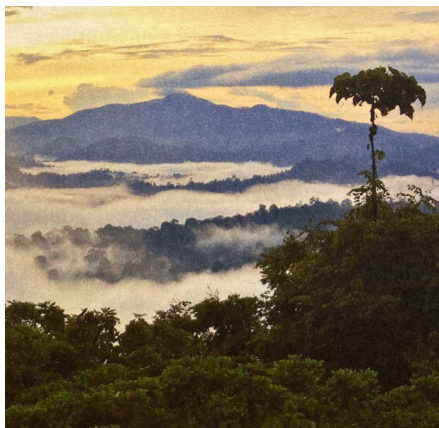
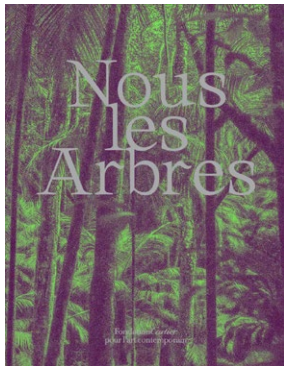
ÖKOSYSTEM WIEN WIENERWALD
Wie gesund ist der Wienerwald



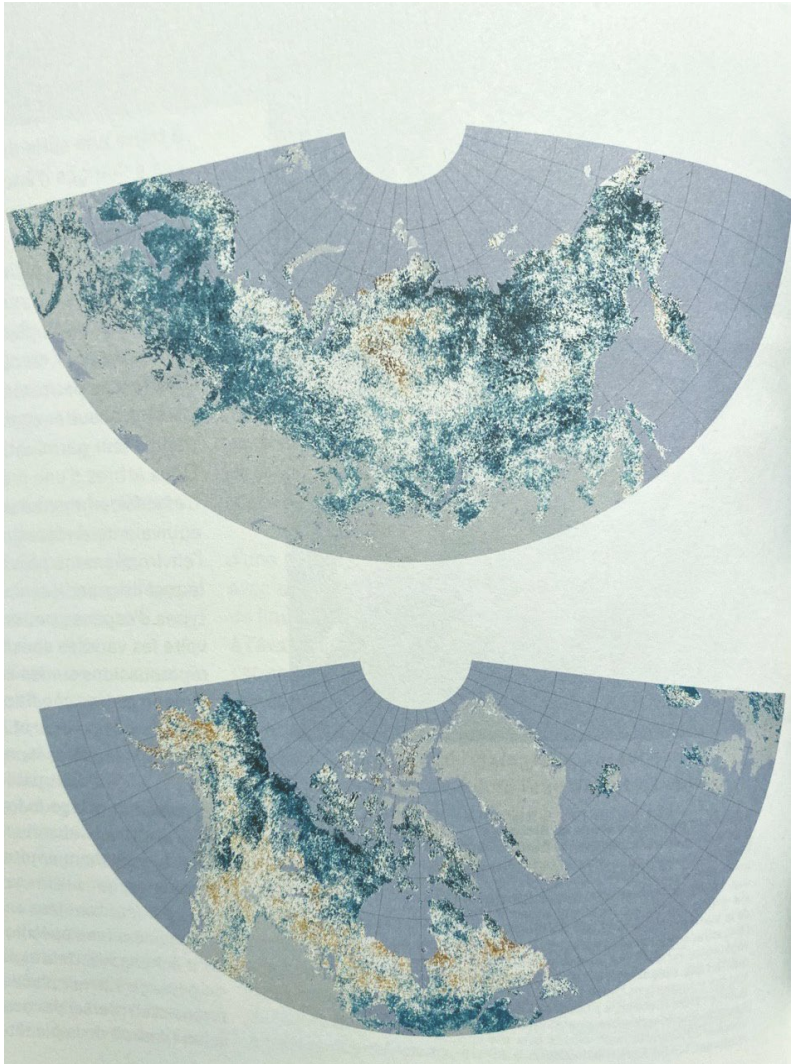
Infrared
aerial images from
Elbe-
Lübeck-Kanal

<https://www.spektrum.de/lexikon/geographie/infrarot-luftbild/3760>

CLIMATE CHANGE



Impact of trees and forest on climate



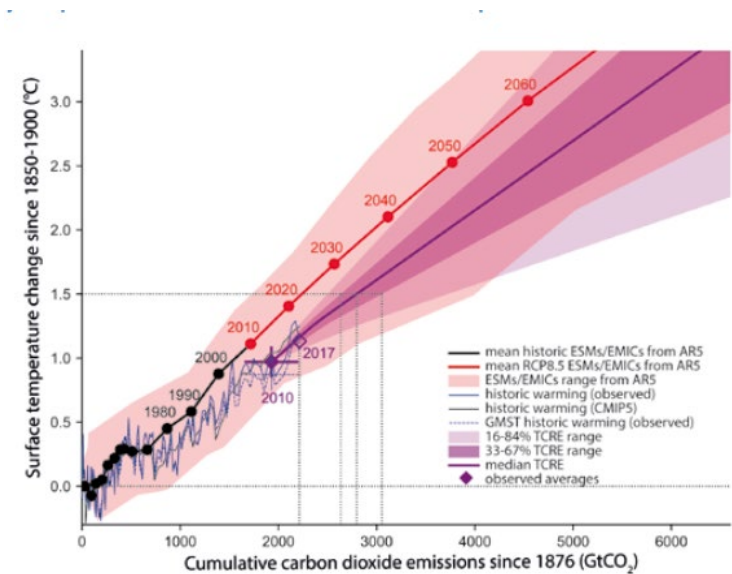
The greening of the Arctic

In the last three decades, the temperatures have risen faster in the Arctic than in any other place on Earth.

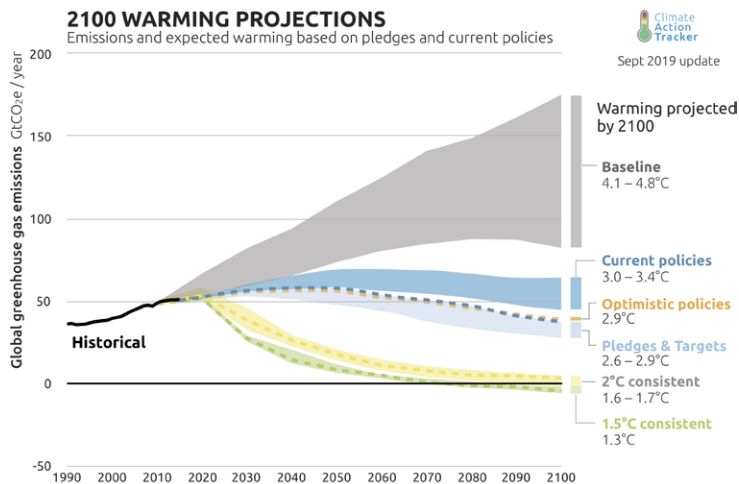
A green „circle“ has appeared in the areas between Eurasia and the North of America, consisting of shrubs and trees where there were tundra- and herbzones.

The boreal forests in northern America have partly become brown.

GRAPHICS ABOUT CLIMATE CHANGE



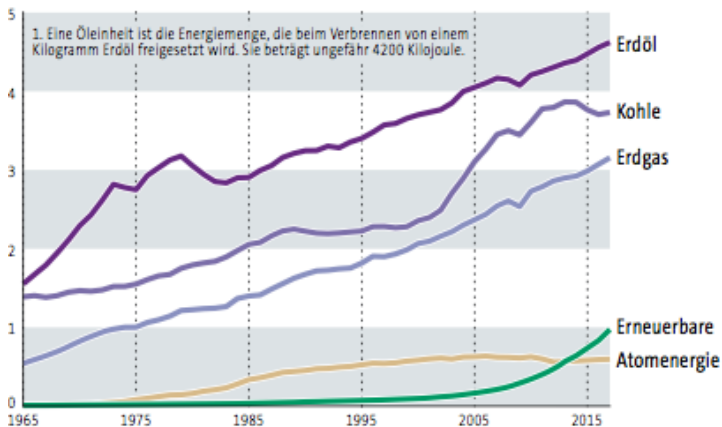
IPCC Report 2015



Greenhousegas emissions

<https://climateactiontracker.org/global/temperatures/>

Primärenergieverbrauch 1965–2017, in Mrd. Tonnen Öleinheit¹

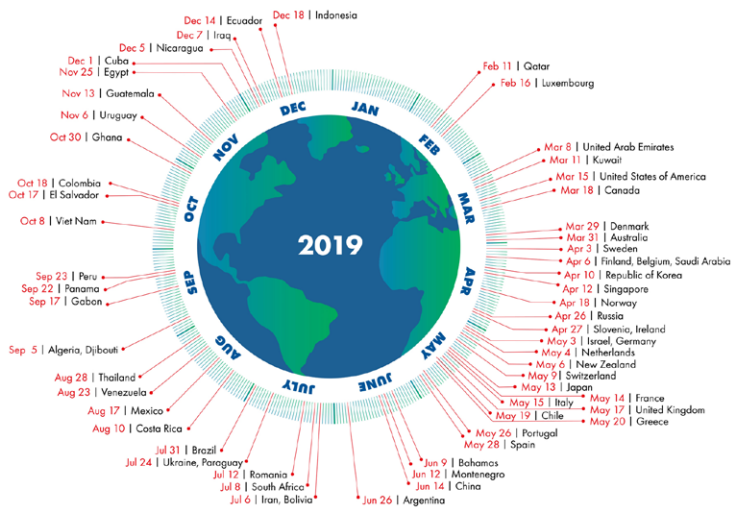


Primärenergiever-
brauch

Atlas der Globalisierung,
Le monde diplomatique

Country Overshoot Days 2019

When would Earth Overshoot Day land if the world's population lived like...



Overshoot Days
2019

Global Footprint Network
National Footprint
Accounts 2019

Liebende könnten, verstünden sie's, in der Nachtluft
wunderlich reden. Denn es scheint, dass uns alles
verheimlicht. Siehe, die Bäume sind; die Häuser,
die wir bewohnen, bestehn noch. Wir nur ziehen allem vorbei wie ein luftiger Austausch.
Und alles ist einig, uns zu verschweigen, halb als
Schande vielleicht und halb als unsägliche Hoffnung.

*Lovers, if they knew how, might utter
strange things in night air. Since it seems
everything hides us. Look, trees exist; houses,
we live in, still stand. Only we
pass everything by, like an exchange of air.
And all is at one, in keeping us secret, half out of
shame perhaps, half out of inexpressible hope.*

Ausschnitt aus: Die Zweite Elegie – Rainer Maria Rilke