

The Influence of the River Danube on the Viennese life quality

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Abstract

The Danube is, while it's the second-longest river in Europe, a major trade route, energy source, and nature reserve. In the city of Vienna, which recently got named the most liveable city for the tenth time in a row, the river is an essential part of its citizen's everyday life, providing an important local recreational area, offering a great range of opportunities including bathing, biking, going for a stroll, fishing and water sports such as sailing and boat rowing. This paper aims at showing in what manner the Danube affects the life quality of Viennese residents and how it is used for leisure. We expect that the public values the city's efforts to create an easily accessible space for recreational purposes. To test this hypothesis, a survey is conducted, providing insights into the benefits gained by having a water body nearby. This comprehensive survey will prove that Viennese people experience better life quality by using the possibilities of Danube regularly.

1) Keywords

Water and recreation, Life quality, Cities and rivers

2) Introduction

Water has always played an essential part in human life since we cannot survive without it. Nearly every major, historic city in Europe developed along a river. Each of those cities has been greatly influenced by the rivers flowing through them and in turn, changed the nature of these rivers for better or worse. These changes included reshaping riverbeds, disturbances caused by powerplants, pollution for industrial reasons, and changes in the riverbanks due to flood protection [1]. The Danube is Europe's second-longest river. It plays an important part in shipping and coins the cityscape of Vienna, a city with a population of around 2 million.

This paper aims at showing in what way the Danube affects the life quality of Viennese citizens. A survey was conducted in order to get first-hand information on how the people in and around Vienna feel the Danube amplifies or lowers their life quality. Other questions in the survey tried to determine in what ways the Viennese use the Danube and how often.

Due to the numerous floodings of the area along the Danube in past centuries, major changes in the flow of the Danube were made to protect the city. These changes also called Danube regulations made sure that the city could no longer be flooded. The initial floodplain was changed, by creating a 280m broad new riverbed into which the Danube was later redirected. The "Danube Channel" an anabranch of the Danube which flows near the city center was also given a concrete riverbed [2]. Other changes included the structural changes of the "Old Danube" and the "New Danube". These are two mostly standing water bodies used for recreational purposes. The "New Danube" can also be used to reduce the

water levels of the Danube during a flood. Between the "New Danube" and the Danube a 21-kilometer-long island was built, the "Danube Island" [2]. Today the remaining former floodplain branches and the "Danube Island" are mostly used for recreational purposes. A well-chosen example would be the "Danube Island Festival", a huge party all over the Danube island.

Vienna has been rated as the most liveable city in the world by different well-known rating organizations. This leads to the question of why that is the case. Other studies have been conducted in this area though not with the specific focus used in this paper. Instead of searching for different reasons for the high life quality in Vienna or looking at how cities are rated, this paper takes the opinions of the citizens and the government into consideration. The data gained this way, is used to look at the actual impact the Danube has on the life quality of the people in Vienna.

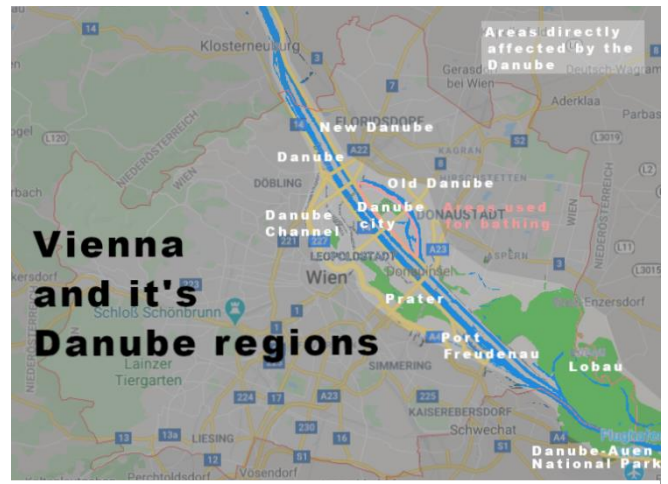


Figure 1: Map of Vienna and the Danube

3) Interview

Additionally, to find literature, relevant organizations and government bodies were contacted to form a baseline. The organizations contacted provided useful materials and an interview with Ms. Maschat of the 18. Municipal Department of Vienna, responsible for urban development and planning (abbreviated to MA 18), could be organized.

The interview was conducted on the 27th of January 2020 with Ms. Maschat of MA 18 according to the plan. The interview was done in German and the transcription was summarized and translated to English. The full transcription of the interview in German and a shortened one in English can be found in the appendix.

In the following section, the interview with Ms. Maschat will be quoted, which is indicated by 3 for the source and by A+Number for the Answer which is quoted. These answers can be found in the Appendix.

The Danube is a very big contributor to the high quality of life of the Viennese citizens. Without the Danube, there would not be agriculture around the city because of water shortages [3; A7] and the infrastructure would take a big toll[3; A6 A7], or the city simply would not exist.[3; A4 A5] In addition to the culture and social infrastructure of Vienna,

the Danube also offers climatic, economic, and psychological advantages [3; A12].

The Danube has many effects on the life quality of Viennese citizens. It offers many leisure opportunities because there are many unpaved green and paved urban spaces free to use for all citizens [3; A1]. The river also provides climatic advantages: The water helps to cool the city and to make plants grow faster, which in return also cools the surrounding areas [3; A12]. Additionally, the fresh air corridor created by the Danube improves air circulation and therefore prevents smog problems [3; A2]. The water also has a calming effect on people. Because of this, projects around the Danube, such as the Danube Island, and the accessibility of the shores, grants the citizens and visitors psychological advantages [3; A12]. The river has a positive economic impact as well, because of the jobs created by it, the usage of the Danube as a freight transport route, and the green views and water views, as in the real estate market, houses with them are more expensive [3; A2 A18].

The Danube affects the quality of life of the citizens in many different ways. The social benefits are the most direct, created by the Danube fresh air corridor, the cooling done by the water, and the leisure opportunities created by the free spaces on the Danube Island and the calming effect of the water. There are also economic benefits, granted by the waterway, the port, and tourism [3; A17 A18].

The Danube is very well integrated and there is little that can be done to improve the Danube in Vienna. There is a good balance between economy, social interest, and nature, in the so-called “complete package” [3; A18 A19 A22 A37]. Although there are ways to increase the diversity of the offers or even to perfect the Danube as a recreational area, improvements could bring the system off balance again: If there were more green spaces, then there are not enough paved spaces needed for activities requiring solid ground such as the Danube Island Festival and some sports. If there were more Danube crossing or access points, then there would not be enough space for recreation or shops. The broad array of offers and provides usage possibilities for everyone. And because of the absence of one-sidedness, the accessibility, the balance abundance of nature and green areas, the climatic effects, the lack of privatization, and generally the good integration, the overall quality of life is very high [3; A13 A15 A22 A29 A36 A39].

The Danube brings countless benefits to the citizens and the city of Vienna. The original benefit gained by the Danube regulation in the 19th century is the protection against flood [3; A19]. Over the year, more actions were undertaken to integrate the Danube into Vienna better. One of the most important benefits gained was the abundance of green areas, which would have not been possible without the Danube regulation. The climatic effects and the usability of the space are major factors influencing the quality of life of the citizens [3; A1 A14 A21]. Another advantage of having an integrated Danube in Vienna is the “international interest” of the river, according to Ms. Maschat. There are famous artworks dedicated to it, such as the Donauwalzer (Danube Waltz), which is played every year at “Vienna New Year’s Concert”. The Danube also brings economic benefits, as it is an important transport route and boosts tourism [3; A16 A17 A18].

There is a broad array of offers along the Danube. Because of this, everyone has the possibility to enjoy the opportunities provided there, regardless of interest. The quantity and

diversity of the uses of the Danube are highly esteemed by the MA 18. The quality of the offers is also much valued, according to Ms. Maschat, having been given a 9 out of 10 [3; A30-A33].

There are some ways to improve the Danube region. The crossing possibilities could be improved, privatized areas could be turned into public green or paved spaces, more public toilets and drinking fountains could be installed and the riverbank could be made more accessible [3; A15 A18 A31]. However, the Danube is very adapted to the current usage. Improvements could offset the balance between the offers and thus eliminating the benefits created by them, according to Ms. Maschat: More bridges would mean less free space, and unpaved areas are less durable and overuse of them will turn them into a dust field [3; A29 A39]. In the future, new, essential, and beneficial improvements can be made. One unneglectable example of possible improvement is to create more green spaces and shaded areas because of global warming. Better accessibility is also needed, as Ms. Maschat predicts that people will go to waters more frequently in the future [3; A42].

Based on the conclusion and findings, a fitting questionnaire for the survey was created to further test the hypothesis.

4. Survey

To test the hypothesis a survey was conducted. The survey was designed with Google Forms and was spread within the social environment of its authors. With this method, the survey reached 209 participants. Of these, 174 participants provided relevant and workable answers for the research project.

4.1. The Aim of the Survey

This survey aims to show whether Viennese citizens are or are not getting affected by the Danube. Furthermore, the survey should show which effect citizens get and why this effect exists. Basing on this, another aim is to find out how a river could be integrated in the best way possible to make people enjoy a better life quality.

For further information please check the appendix.

be quoted in the following section. This is indicated by 3 for the source and by A+Number for the Answer which is quoted. These answers can be found in the Appendix.

4.2. Coherence between the Interview and the Survey

After defining a framework by interviewing a representative of the city council of Vienna, in order to find out how the city’s efforts affect the life quality, the people had to be asked. For this reason and to answer the research questions following questions were developed.

4.3. The questionnaire:

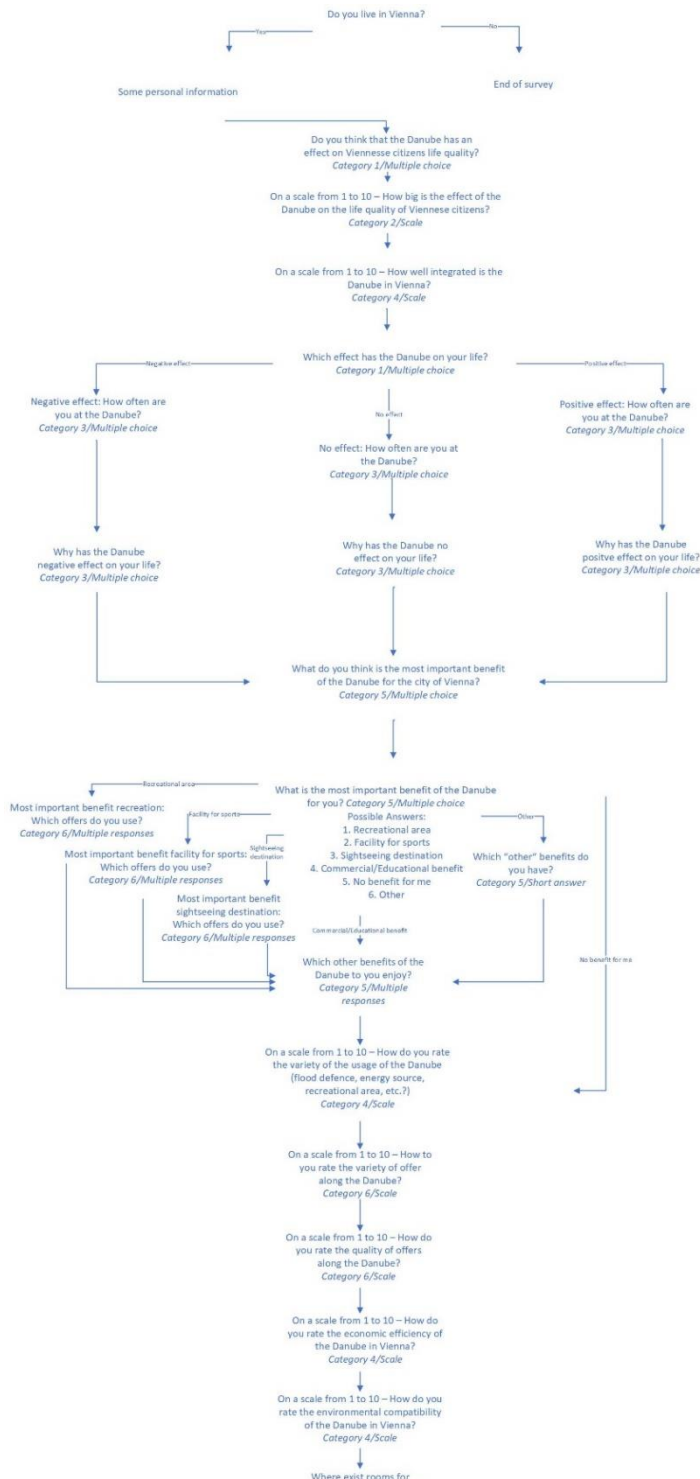


Figure 3: Structure of the questionnaire

The only requirement for answers to be considered was whether the participant is living in Vienna. The arrows illustrate the order of our questions and indicate different pathways of the survey. These exist to avoid having to answer why the Danube harms one's life, although one claimed the Danube has a positive effect on oneself.

4.4. Results:

4.4.1. The participants

209 people participated in the survey.

174 people lived in Vienna, so their answers were taken into consideration.

63 participants are male, 109 female and 2 identified as "other". In the age group 0-20 the survey had 128 participants, in the age group 21-40 29 people participated. There were 13 participants, in the age group 41-60 and 3 people in the age group 61+.

4.4.2. Answers to the survey:

In the following section diagrams and tables are provided to illustrate the data from the survey. In the tables, the first

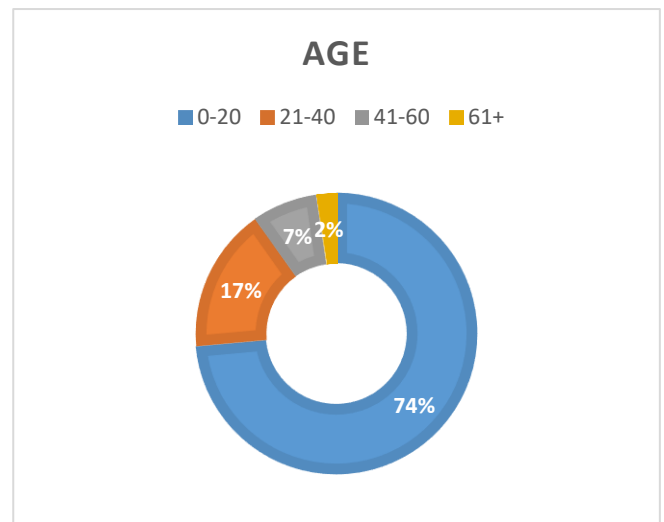


Figure 2: Age of participants

number gives the proportion of people who choose a certain answer and the second number the range of fluctuation. In the diagrams, a vertical line indicates the range of fluctuation, if it seems to be useful. Only the proportion is represented by pie charts and bar charts otherwise. The way to answer (for instance multiple choice, scale, multiple responses, or long answer) will be written next to the question in *italics*.

The text gives an overview of the situation. For exact data please see the tables or diagrams, which represent the exact amounts.

Question 1: Do you think that the Danube has an effect on Viennese citizens' life quality? *Multiple choice*

A significantly higher proportion of people answered with yes, than people answered with no.

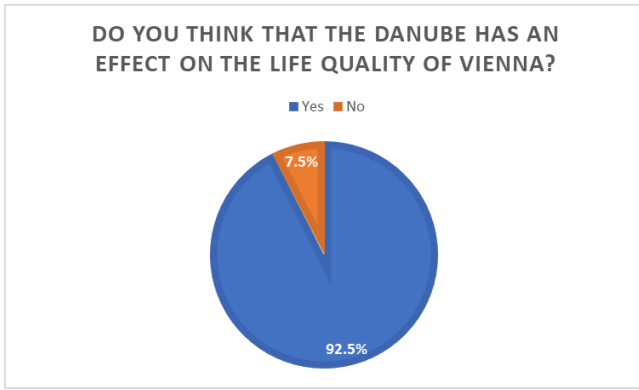


Figure 3: Do you think that the Danube has an effect on the life quality of Vienna

Question 2: On a scale from 1 to 10 – How big is the effect of the Danube on the life quality of Viennese citizens? *Scale*

The scales were an important instrument to determine exact numbers. To make answering easier, the scale in the survey was only from 1 to 4. To increase the presentability of data the scale was converted to a scale from 1 to 10. The answer 1 was given the value 0, the answer 2 was given the value 10/3, the answer 3 was given the value 20/3 and the answer 4 was given the value 10. Afterward, the average value was calculated and represented in a diagram. The vertical line indicates the range of fluctuation.

The effect of the Danube on the life quality of Viennese citizens was averagely rated with 5.04 (+/-4%). This means a roughly equal distribution between people with a low effect and a high effect.

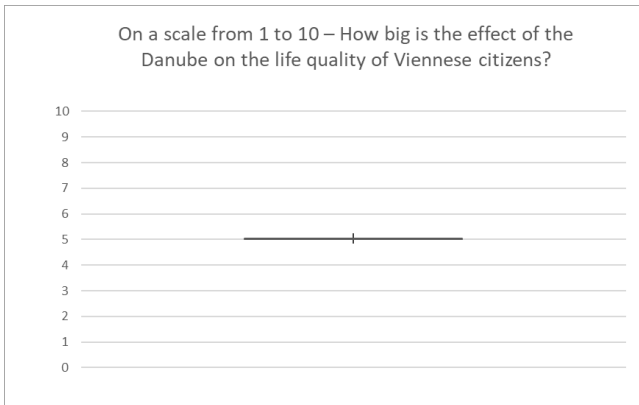


Figure 4: Impact of the Danube on life quality

Question 3: On a scale from 1 to 10 – How well integrated is the Danube in Vienna? *Scale*

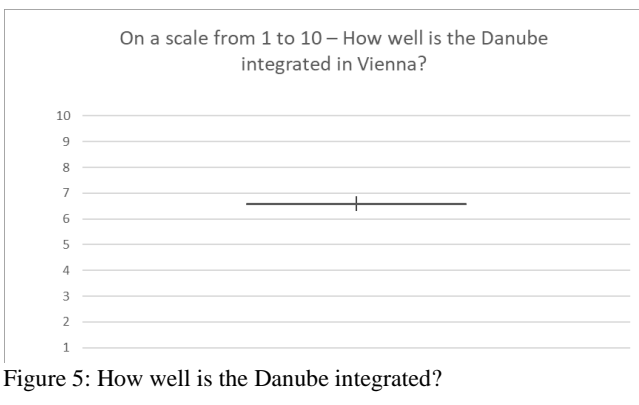


Figure 5: How well is the Danube integrated?

The integration of the Danube was averagely rated with 6.59 (+/-4.4%).

Question 4: Which effect has the Danube on your life? *Multiple choice*

A significantly higher amount of people enjoyed a positive effect than people not affect. Substantially more people experience no effect than people having a negative effect.

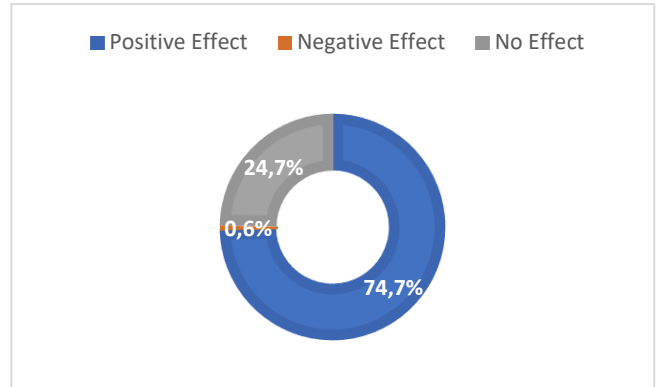


Figure 6: What effect does the Danube have?

Question 5: Negative effect: How often are you at the Danube? *Multiple choice*

The only person who claimed to have a negative effect by having the Danube nearby visited the river infrequently.

Question 6: No effect: How often are you at the Danube? *Multiple choice*

The biggest proportion of people having no effect go to the river infrequently. Substantially fewer people are never, once a month, once a week or every day near the river.

Table 1: Proportion between usage and impact of the Danube

Frequency of visits to the Danube	Percentage of people	Fluctuation range
Never	4.65%	+/-4.31%
Infrequently	81.40%	+/-9.18%
Once a month	9.30%	+/-6.23%
Once a week	2.33%	+/-3.02%
Everyday	2.33%	+/-3.02%

Question 7: Positive Effect: How often are you at the Danube? *Multiple choice*

The major group of people, who is enjoying positive effects by the Danube, is primarily once a month or infrequently at the Danube. A smaller number of inhabitants visit the Danube once a week or every day.

Table 2: Frequency of visits

Frequency of visits to the Danube	Percentage of people	Fluctuation range
Never	0.78%	+/-1.01%
Infrequently	35.94%	+/-7.92%
Once a month	39.84%	+/-8.46%
Once a week	13.28%	+/-4.40%
Everyday	10.16%	+/-3.79%

Question 8: Why has the Danube negative effect on your life? *Multiple responses*

A single person is experiencing negative effects because of noise pollution around the Danube in the night.

Table 3: Reasons for a negative effect of the Danube

Reasons for having a negative effect	Percentage of people	Fluctuation range
The people at the Danube stretch my nerves	0.00%	+/-0.00%
It is too loud at the Danube in the night	100.00%	+/-0.00%
It is too risky at the Danube (Danger of drowning or robbery)	0.00%	+/-0.00%
I think that investing in the Danube is wasting of resources	0.00%	+/-0.00%
I feel uncomfortable with the water body's nearby	0.00%	+/-0.00%

Question 9: Why has the Danube no effect on your life? *Multiple responses*

As data about question 9 shows: Not affected by the Danube is mainly caused by distance, time, and other offers more nearby or better (which cannot be predicted by the data). Another important role plays spending time rather at home. In comparison to these things, a lack of interest in the offers along the Danube and dislike against water bodies are less significant.

Table 4: Reasons for the Danube not having an effect

Reasons for having no effect	Percentage of people	Fluctuation range
I have less time for enjoying	37.21%	+/-13.97%
I live too far away	62.79%	+/-13.97%
I use other local recreational areas	41.86%	+/-15.07%
I am not interested in the offers at the Danube	18.60%	+/-9.18%

I do not like water bodies	9.30%	+/-6.23%
I spent my time rather at home	34.88%	+/-13.41%

Question 10: Why has the Danube positive effect on your life? *Multiple responses*

Mainly due to recreational benefit and the simple beautifulness of the Danube, inhabits of Vienna experience positive effects. A considerably littler number of citizens enjoy sportive benefits and an ecological benefit. Other reasons can be seen in the table below.

Table 5: Reasons for a Positive effect of the Danube

Reasons for having positive effects	Percentage of people	Fluctuation range
Sportive benefit	35.38%	+/-7.78%
Recreational benefit	80.77%	+/-5.38%
Commercial benefit	0.00%	+/-0.00%
Ecological Benefit	30.00%	+/-7.02%
My school is near the Danube	0.77%	+/-0.99%
I connect beautiful memories of my childhood with this place	0.77%	+/-0.99%
I like the beautifulness of the Danube	71.54%	+/-6.80%

Question 11: What do you think is the most important benefit of the Danube for the city of Vienna? *Multiple choice*

As many citizens think that the main benefit for the city of Vienna is the Danube as a recreational area as many citizens think that all benefits of the Danube are equally important for the city of Vienna. About 10% of people claimed the Danube as an energy source, as a shipping way, as a facility for sports or as a sightseeing destination is very important for the city council of Vienna.

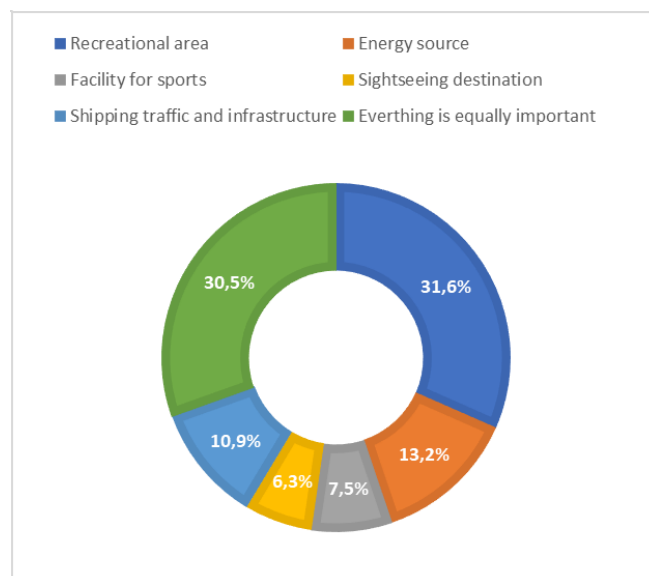


Figure 7: What is the most important aspect of the Danube?

Question 12: What is the most important benefit of the Danube for you? *Multiple choice*

The most important benefit for the people is the Danube as a recreational area. Substantially fewer residents of Vienna choose “facility for sports”, “sightseeing destination” or “no benefit for me”. A very little fraction of people claimed to have benefited from commercial or educational usage.

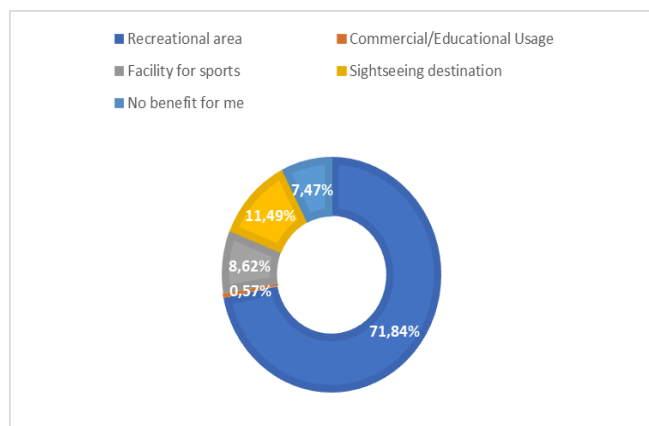


Figure 8: What is the most important benefit of the Danube for you?

Question 13: Most important benefit recreation: Which offers do you use? *Multiple responses*

The biggest proportion of people benefiting by recreation, do this due to the possibility to meet with friends, to enjoy the green areas, relax by the Danube, or by going bathing. Another major role plays the comfortably climate or atmosphere and the parties by the Danube (especially the Danube Island Festival) Fewer citizens use the gastronomical offer or enjoy going there with the family. A little fraction of inhabitants enjoys the sports events and even fewer ones have a barbecue there.

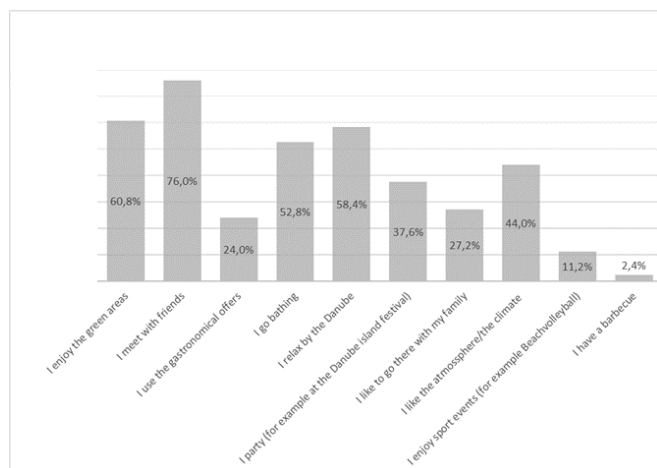


Figure 9: Most important benefit recreation: Which offers do you use?

Question 14: The most important benefit facility for sports: Which offers do you use? *Multiple responses*

Everything about boats, vehicles, and running is very common with people enjoying the facility for sports at and along the Danube. Swimming (professionally/not bathing), ball sports, and going for a stroll are significantly less major. For less important sports read the table below.

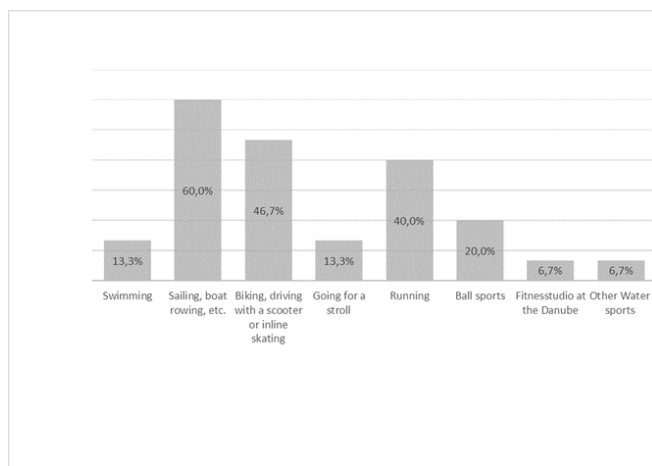


Figure 10: The most important benefit facility for sports: Which offers do you use?

Question 15: The most important benefit sightseeing destination: Which offers do you use? *Multiple responses*

The Danube Tower (the highest tower of Austria with 252m standing along the Danube and offering an incredible view at Vienna and the surrounding regions from a panorama terrace) is the most popular sightseeing destination, directly followed by sightseeing boats sailing across the Danube and the Danube Channel. In comparison to these, sightseeing buses driving around the areas along the Danube and the Hydroelectric power station Freudenu (which offers tours through the power station and is an important electric energy source with an average output of 172 MW [4]) are less popular.

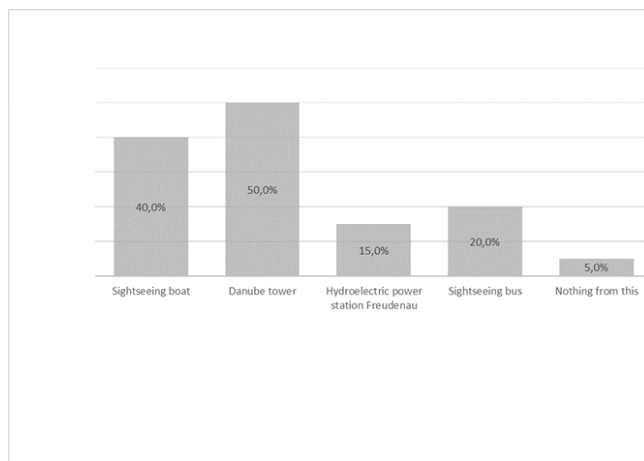


Figure 11: The most important benefit sightseeing destination: Which offers do you use?

Question 16: Which other benefits of the Danube do you enjoy? *Multiple responses*

This data is not very representative. In order to prevent people from not reading the question carefully and therefore choosing their main benefit again, although it was asked for other benefits apart from the main benefit. However, this distortion of the result does not distort the fact that inhabitants benefit by the Danube as a facility for sports and as a sightseeing destination, although it is not their main benefit.

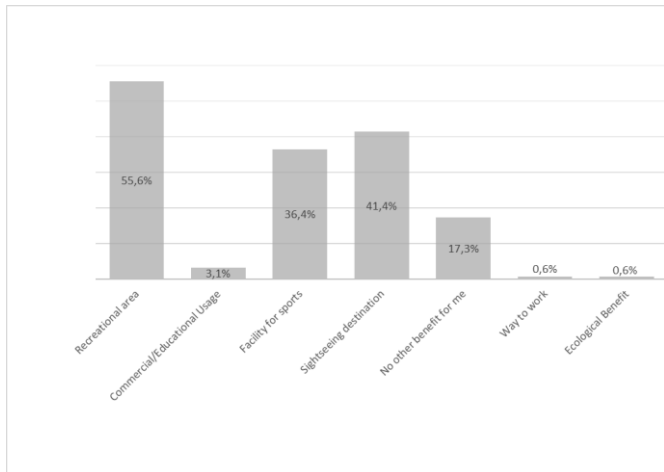


Figure 12: Which other benefits of the Danube to you enjoy?

Question 17: On a scale from 1 to 10 – How do you rate the variety of the usage of the Danube (flood defense, energy source, recreational area, etc.)? *Scale*

The variety of the usage of the Danube was averagely rated with 7.16 (+/-3.9%)

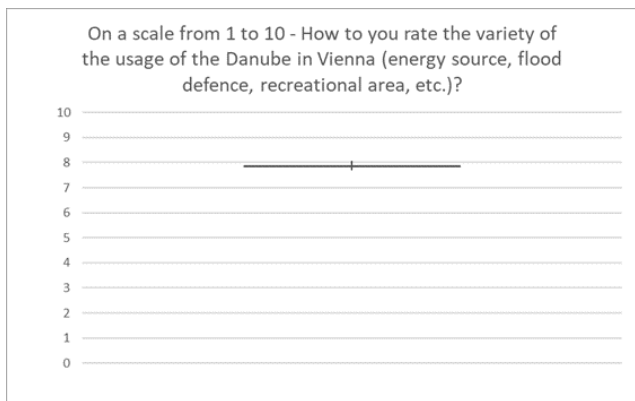


Figure 13: Variety of usage of the Danube

Question 18: On a scale from 1 to 10 – How do you rate the variety of offers along the Danube? *Scale*

The variety of offers of the Danube was averagely rated with 6.93 (+/-4.1%).

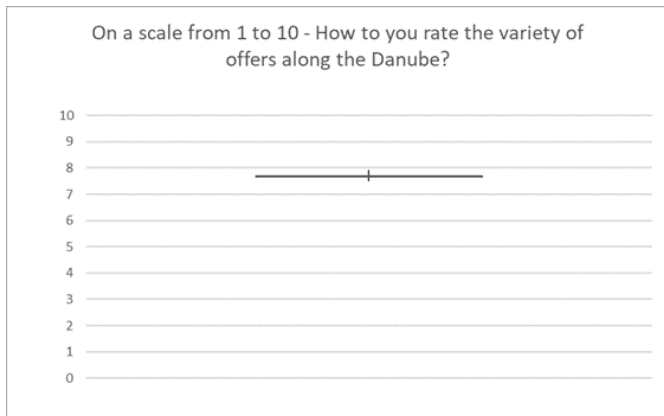


Figure 14: Variety of Offers

Question 19: On a scale from 1 to 10 – How do you rate the quality of offers along the Danube? *Scale*

The quality of offers of the Danube was averagely rated with 6.62 (+/-3.7%)

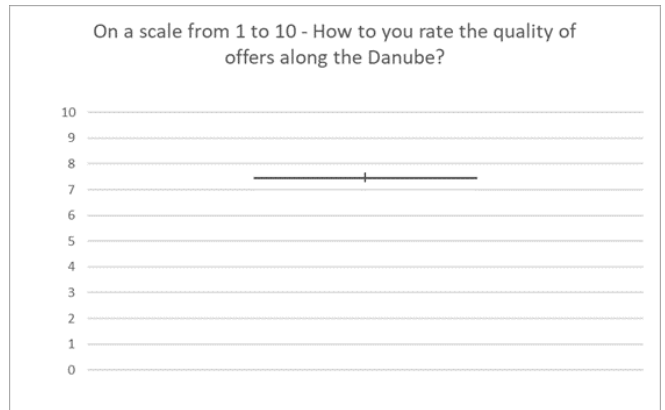


Figure 15: Quality of Offers

Question 20: On a scale from 1 to 10 – How do you rate the economic efficiency of the Danube in Vienna? *Category 4/Scale*

The economic efficiency of the Danube was averagely rated with 6.36 (+/-4%).

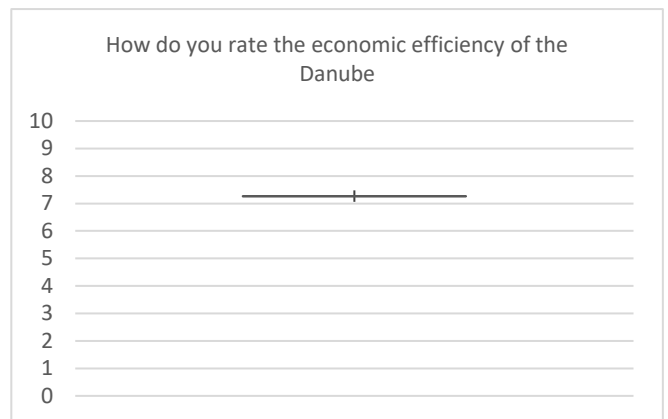


Figure 16: Economic efficiency

Question 21: On a scale from 1 to 10 – How do you rate the environmental compatibility of the Danube in Vienna? *Category 4/Scale*

The environmental compatibility of the Danube was averagely rated with 6.47 (+/-3.9%).

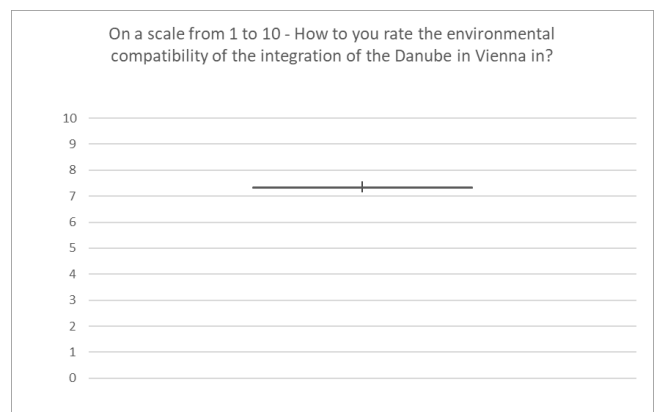


Figure 17: Environmental compatibility

Question 22: Where exist rooms for improvement of the Danube? Category 7/Long answer

Table 6: Possible Improvements of the Danube

Kind of room for improvement	Percentage of people	Fluctuation range
<i>No Answer/Nothing to better</i>	71.43%	+ -5.19%
<i>Fewer Pollution/A cleaner Danube</i>	7.14%	+ -2.37%
<i>More environmental protection/more untouched areas</i>	4.91%	+ -1.94%
<i>Better Infrastructure (especially more bridges)</i>	4.46%	+ -1.85%
<i>More offers</i>	3.57%	+ -1.65%
<i>More (modern) recreational areas</i>	1.79%	+ -1.15%
<i>More green areas</i>	1.34%	+ -1.00%
<i>Higher quality of offers</i>	0.89%	+ -0.81%
<i>Dog Prohibition</i>	0.89%	+ -0.81%
<i>Combating algae</i>	0.89%	+ -0.81%
<i>More Advertising</i>	0.45%	+ -0.57%
<i>Deprivatization</i>	0.45%	+ -0.57%
<i>More areas for gardening shops</i>	0.45%	+ -0.57%
<i>More Power Stations</i>	0.45%	+ -0.57%
<i>Better overall integration</i>	0.45%	+ -0.57%
<i>Not specified</i>	0.45%	+ -0.57%

Single answers word for word translated:

1. More modern recreational areas; reliable bridges
2. Not many things (not specified)
3. More nature reserves; a cleaner Danube
4. More cleaning along the Danube
5. More offers, fewer pollution
6. A higher quality of restaurants and bars
7. Fewer pollution caused by ships in some parts
8. Compulsory exhaust filters for ships
9. More offers for free time
10. More nature reserves
11. More modern recreational areas; reliable bridges
12. Not many things (not specified)
13. More nature reserves; a cleaner Danube
14. More cleaning along the Danube
15. More offers, fewer pollution
16. A higher quality of restaurants and bars
17. Fewer pollution caused by ships in some parts
18. Compulsory exhaust filters for ships
19. More offers for free time
20. More nature reserves
21. More Bridges to get to the other riverside
22. A better connection for traffic, some offers can (for example the Donauinsselfest (Danube island festival)) could be extended and made more eco-friendly
23. More offers in winter (the most offers as the Copa Beach, the Tel Aviv Beach or the Danube island festival are in summer)
24. More green areas (for example to have a picnic)
25. More areas prohibited for dogs
26. Plant more trees
27. More cleanness
28. More advertising. Most tourists stay in the old town of Vienna and do not know about the offers of the Danube. Mainly in summer
29. The Danube could be cleaner
30. More recreational offers, but please no more hydroelectric power stations, because they reduce the flow velocity and, therefore. the already low biodiversity
31. Stop the problems with algae along the Old Danube
32. Some areas could be designed with more beautifulness
33. More festivals
34. The Danube could be integrated better, there could be faster connections to the Danube and more activities offered
35. Deprivatization
36. There could be more rules so that everyone knows that the Danube is no dump
37. There could be more drinking water fountains. It is annoying me that there is a bikeway going through a dog park.
38. Cleaning more often, because the Danube is sometimes very dirty
39. More modern recreational areas and reliable bridges
40. Prohibit pollution und protect the Flora and Fauna
41. Environmental projects (for example against plastic pollution, etc.)
42. More public/cost-free entries (for example to the Alte Donau (Old Danube)), more nature preserved areas with less noise pollution
43. Fish out the garbage of the Danube
44. More cleanness
45. By the underground train stations at and around the Donauinsel (Danube Island) resp. nearly more gastronomical offers
46. Preserved areas for Flora and Fauna
47. Less garbage
48. Combating the algae in the Old Danube
49. The Danube could be more untouched
50. More City bike stations, more areas for gardening shops to buy fruits, vegetables, etc., especially in summer more drinking water fountains would be great
51. The quality of gastronomical offers could be improved

52. Separation of bus traffic and foot traffic in the harbor area (Section Reichsbrücke (Imperial Bridge))
53. Cleanness
54. The towpaths could be extended
55. More Nature along the Donaukanal (Danube Channel)
56. The Danube could be cleaner
57. More Power stations for more eco-power
58. They could have let the Danube untouched, instead of destroying important habitats for animals. It clearly needs more nature preservation along the Danube
59. Stop pollution

These answers were categorized and summed in a table. The most important group of residents did not answer. Due to the fact that Question 22 was not compulsory, it cannot be determined if this was due to nothing to better or if there was not enough motivation for an answer. Most people answered claimed, that the Danube could be cleaner. Fractionally fewer people wanted more environmental protection and/or better infrastructure. Other rooms for improvement claimed more than two times are more offers, more (modern) recreational areas, and more green areas. For further information please see the table below.

4.4. Conclusion

The following conclusion can be drawn by data of the survey and the interview is indicated by footnotes.

Question 1 shows that the Danube has an effect on Viennese citizens' life quality. This effect is for most people positive. One-quarter of people asked have no effect by having the Danube nearby. Only 0,5 % experienced a negative effect. Therefore, it can be concluded that the Danube increases the life quality in Vienna.

Question 2 depicts that the Danube is an important part of Vienna. As it was already stated in the interview by Ms. Maschat, Vienna would not exist without Vienna [3; A4, A5, A6, A7, A8]. In addition to the culture and social infrastructure of Vienna, the Danube makes important contributions to the high quality of Vienna [3; A3, A4]. The importance of the Danube for the life quality was on average rated with 5.04. For the reason that is not any data for comparison, it is not possible to determine how big the influence of the Danube for the life quality is by only looking at the survey. However, as it was said in the interview the Danube and the connected surroundings are responsible for about one-third of the life quality of Vienna, and the importance was rated with 7 by Ms. Maschat [3; A3, A4].

The following section refers to the *Global Liveability Ranking* by *The Economist*. Vienna reached the first place the second time in one row in 2019. The *Global Liveability Ranking* is an annually published index consisting of five categories: Stability (weight: 25% of total), Healthcare (weight: 20% of total), Culture & Environment (weight: 25% of total), Education (weight: 10% of total) and Infrastructure (weight: 20% of total). The Danube influences the categories Infrastructure and especially Culture & Environment. For

more information on the points reached by Vienna in each category and on the ranking, please see 7.4. and [5].

An important conclusion drawn by the sample calculation is that Vienna would not be the most liveable city anymore without the Danube.

Question 10 illustrates people gain a positive effect because they use the Danube and the connected recreational areas for recreation. The beauty of the Danube is very significant for citizens. Significantly fewer people use the Danube for sports or as a sightseeing destination. No participant of our study and only a few people in Vienna seem to have commercial benefits by the Danube.

The MA 18 confirmed that and admitted that Vienna's citizens gain positive effect by climatic advantages through fresh air brought into the city through the Danube fresh air corridor [3; A2]. However, the city council of Vienna claimed that people gain a positive effect by the complete package of offers [3; A22]. This maybe is a problem for city planning, because people do not want so many offers along the Danube and instead an increased amount of green areas, untouched areas, and modern recreational areas. This thesis is supported by Question 22.

Economic advantages for both the people and the city result through properties build along the Danube and sold expensively and the Danube as a freight transport route. The harbor Freudenuau, which is one of the bigger harbors along a river, plays an important role for the city. The good image of Vienna caused by the well-integrated river brings tourists to Vienna. [3; A3, A16, A17, A18].

Shops located near or aside the Danube are not so big money-makers according to [3; A18]. Very few people in the survey claimed to have economic benefits. That supports that the Danube is mainly a recreational facility and should not be used intensively for commercial benefits.

Having no effect is primarily caused by distance, a lack of time, and the usage of other recreational areas. Just 20% do not like the offers along the Danube and 10% do not like water bodies in general. This illustrates that the Danube is a well-constructed recreational area, but not well-accessible for many (see below).

There is too little data to conclude why people experience a negative effect from the Danube. This shows that an integrated river mainly betters life quality and that negative effects are very rare.

Inhabits of Vienna rated the integration of the Danube in Vienna with 6.59 out of 10. This depicts that the Danube is a well-integrated river, however with rooms for improvement (see below).

The economic efficiency was rated with 6.36 out of 10, the environmental combability with 6.47 out of 10. This shows that environmental combability and economic efficiency are less good as the overall integration. Therefore, the integration as a recreational facility and as facility for sports has to be fractionally better than 6.47.

Ms. Maschat said that environmental interest and economic interest are well balanced [3; A37]. She assessed the environmental compatibility in the middle range of Danube

Island with 6 and the last kilometers with 10. Overall, she assessed the environmental compatibility with 9. The economic efficiency was rated with 9 by her. This is significantly higher than the people's opinion [3; A34, A35, A37].

The urban planning department claimed that they did a very good job, especially with the pioneer project, Danube Island. Although there were plans to build a "Mini-Manhattan", the department fought to keep the Danube surrounding areas green and suggest that these areas developed to a common area in the past few decades [3; A14]. The MA18 suggested that the Danube is in the top third of a hypothetical ranking between all integrated rivers worldwide as well as in the category recreation and at overall [3; A24, A25].

The many green areas are appreciated by the people as they gain positive effects by using the Danube as recreational area.

More than 30% think that the most important benefit of the Danube for the city council of Vienna is recreation. It is also thought that Vienna gains mainly by the shipping traffic and by using the Danube as an energy source (each about 12%) in contrast to 6% each claiming the facility for sports or the usage of the Danube for sightseeing boots the city council of Vienna.

As it was already illustrated in the interview the benefit from the economic situation, especially tourism, along the Danube for the city seems more important than the benefit by a higher life quality [3; A17]. However, the city planning department also described the complete package and the very good balance of interest as the "fascinating thing about the Danube" [3; A19].

This is confirmed by the citizens of Vienna, as 30.5% claimed that all benefits are equally important for the city council of Vienna.

People, however, mainly benefit by the Danube as recreational facility (71%).

The variety of usage is rated with 7.16 by the participants of our study, which is significantly above average in comparison to other ratings in the survey and with 9 by Ms. Maschat. This shows that the city council may be assessing the Danube as too good.

These numbers, however, illustrate integrating a river both for the benefits of the city (economic benefits) and the benefits (recreational benefits) of its citizens as Vienna did it is possible.

As it was already shown above, the Danube is well integrated, but there are also some possibilities for improvement (see below).

The data of Question 16 is not very representative. In order to prevent people from not reading the question carefully and therefore choosing their main benefit of Question 12 again, although it was asked for other benefits apart from the main benefit. Although this distorting, it can be claimed that at least 80% of people enjoy the Danube as a recreational area. This can be predicted because 71% claiming their main benefit is recreation and 55% claiming their other benefit is recreation and if at least 20% of people understood the

question. Other important benefits are the facility for sports and the Danube with its natural or artificial sights as a sightseeing destination, as well as the main benefit or as other benefits. The smallest proportion of people (0,6%) mainly feel a benefit from the economy (3% benefit by economic too), while 8% do not feel any benefit.

This leads to a conclusion: The Danube is a recreational area, which should be usable as sportive facilities and as a sightseeing destination (which will also help tourism and therefore the economic efficiency of the Danube).

Question 13, Question 14, and Question 15 illustrate the offers used along the Danube. Question 13 shows people mainly do not use offers defined as certain services (for instance, gastronomical offers, the possibility to have a barbecue or the beach volleyball event at the Danube Island). They regard the Danube as an offer. They meet there with friends, go there with their family, enjoy the green areas, relax by the Danube or enjoy the atmosphere/the climate. The only certain offer used by more than half of the people is the possibility to go bathing along the Old Danube (Alte Donau). Significantly fewer people party (for example at the Danube Island Festival), although 2,7 million visitors attended the Festival in 2019 [6].

It can be concluded that water itself offers many benefits, for instance, climatic and psychological benefits according to the Interview and recreational benefits according to the survey and does not need any additional offer when it is assumed that the water is well-integrated.

The quality of offers of the Danube was averagely rated with 6.62 by the people and with 9 by the urban planning department.

For the reason that biking, driving with a scooter or inline skating, sailing, boat rowing, etc. and running are important for about half of the people, it is likely that the variety of possibilities is appreciated. The variety of offers of the Danube was averagely rated with 6.93 and with 9 by the urban planning department.

Half of the people using the Danube as sightseeing destination named the Danube Tower as their main sight. The sightseeing boat is slightly less important for locals. This indicates that sightseeing destinations are primarily used by tourists, because these destinations are the most famous, as it can be seen on many websites and booklets for tourists [7][8].

Question 22. seems to illustrate that the main proportion of inhabitants do not want to improve something. As Question 22 was formulated as an open-ended question and was not compulsory to answer, many people did not answer it. Therefore, it cannot be determined if the Danube is perfect as it is.

Locals, who answered the question, revealed that there would be room for improvement. The main thing to be improved was the cleanliness. That means more cleaning at the Danube Island or in the river Danube itself. For instance, an oil slick floated at the north end of the Danube on the 16th of January 2020 [9].

Another frequently named problem was a lack of infrastructure. This refers to too few bridges to get to the

Danube Island, not enough drinking fountains, and a poor connection to public transportation. This would enable people, who feel no effect by the Danube, entering easily.

This problem was also indicated by the MA18. Ms. Maschat admitted that the bridges are this double-edged sword. If more bridges cross the Danube, space is also less accessible, and the quality of the green areas will decrease [3; A39].

The environmental compatibility of the integration of the Danube was rated with 7.36. Other people hope for more offers. However much more people want to have more natural areas, some want the Danube to be a nature reserve without much human influence. They also think that there are too many offers blocking green areas to exist.

This problem was also mentioned by the MA18. Privatized areas could be turned into public green areas or paved spaces. For instance, the yacht harbor is using a lot of space, which could be used as a green area instead [3; A13, A28]. However, the urban planning department is not going to change anything, because it is not their competence or due to that fact, that they need the paved areas in order to that unpaved areas are less durable and overuse of them will turn them into a dust field [3; A36, A39].

However, more green areas would help recreation to flourish, as data from Question 13 reveals (people use the Danube itself as an offer, not the Danube's specific services).

The city council of Vienna is planning to build more public toilets and drinking water fountains [3; A40].

5) Discussion:

5.1. The integration of the Danube in Vienna

The integration of the river made the Danube accessible for the people to use it for recreation, sports, as sightseeing destination, for economic purposes.

The Danube is a well-integrated river. First, the river is flood protected. Additionally, it offers benefits for both the people and the city. People profit from the recreational areas and the beneficial impact of water itself. The Danube brings fresh air and a positive psychological effect. The city benefits from the economy, which profits directly by selling expensive properties, the Danube as freight transport way, and the modern harbor Freudenu and indirectly by the good image for Vienna caused by the river and the resulting tourism attraction.

Besides the culture and the social infrastructure, the Danube plays an important role in the city of Vienna. Nearly three-fourth of Viennese citizens have positive effects by the river. Without the well-integration of the Danube Vienna would not be the most liveable city anymore.

Recreational areas are designed very well, only the cleanliness could be improved. There were no complaints about the facilities for sports and sightseeing destinations.

Both the people and the city said that the offers are well balanced with each other. More offers would decrease the environmental compatibility, better environmental compatibility would decrease the infrastructure. This shows

that although rooms for improvement were mentioned, reaching a better integration could be very hard.

As the MA18 often overrated the perfectness of the integration, it can be concluded that there is more work to do than the city of Vienna thinks of. For instance, the quality and variety of offers could be improved. Many people want the river to be more untouched and be less used. Less integration of the Danube would have made the quality of the recreational areas better. Therefore, the integration of the river was more important for the benefits of the city, as it made the river accessible for usage as energy source, as freight transport way, and for building properties and made it possible to build a harbor. Despite inhabitants appreciated the variety of usage of the Danube.

A possible solution is to build a harbor and make the river accessible for shipping traffic and as energy source but let the former green areas before the integration untouched. This means no building of shops and properties directly along the river but in some distance so that there is no destruction of nature. For example, the former meadows along the Old Danube could have let untouched instead of building an urban area there. Danube Island should be paved to ensure that it will not be a dust field.

5.2. Coherences between water and life quality

The main conclusion drawn by this paper is, that there exist significant coherences between water and life quality. This results directly by climatic, psychological and recreational effects and indirectly by economic benefits. Integrated rivers bring more benefits to the people and especially the city than not-integrated rivers.

Integrating a river causes nearly just positive effects. No effects are caused by a lack of time and lack of distance. Negative effects are very rare. Therefore, integration of rivers only increases life quality, if it is done the right way.

5.3 The best way of integration

Water is beneficial for itself as it was shown in this paper.

The comprehensiveness of this paper is not sufficient to determine the best way to integrate a river right. Nevertheless, it can give a good example of successful integration and it can make recommendations for good integration.

The main target of integration should be flood protection, without flood protection, integration is useless. This target can be reached by building a second riverbed, taking the additional amount of water in times of floods. Between these two riverbeds an island exists, which should be used for recreational purposes. Former green areas should not be destroyed, but instead connected well, through modern infrastructure, too expensive properties near the recreational areas and the rest of the city. Making the river accessible for shipping traffic, eventually building or modernizing a harbor, and using the river as an energy source increases the economic efficiency of the river and ensures benefits for the city. Too many shops or offers should be avoided, however, the facility for sports and some sightseeing destinations should be built as it does not distort the green areas.

5.4. The value of this paper

This paper should show the underestimated impacts of rivers on the life quality of cities and encourage cities to integrate their rivers better as it has a great impact on the life quality and the economic efficiency of the city. It should give an example of successful integration as it was confirmed by the citizens. And offer guidelines for better integration.

As we are citizens of Vienna, we can confirm that the Danube is very important for the inhabitants of Vienna. The Danube is an essential part of Vienna and we cannot imagine a life without the Danube.

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7. Appendix

7.1 German Interview Transcription

Q...Question by the interviewer, A...Answer by Ms.Maschat

Q1: Wirkt sich die Donau auf die Lebensqualität aus?

A1: Gerade mit der Donauinsel, die ursprünglich nur dieses technische Bauwerk zum Zwecke des Hochwasserschutzes war. Es hat sich mit der Zeit entwickelt. Dieser gemeinsame Raum, wo nördlich und südlich der Donau gemeinsam zusammenkommt, obwohl die Stadt durch die Donau getrennt ist. Der Donaoraum ist das verbindende Element zwischen diesen beiden Entwicklungsgebieten, die die Stadt eben hat. Die Donauinsel an sich besitzt mit diesen sehr urbanen Bereichen in der Mitte und sogar den kleinen Naturschutzgebiet am südlichen Ende eine wahnsinnige Spanne an verschiedenen Freizeit- und Naturerlebnismöglichkeiten und ohne Donauinsel wäre uns viel im Bereich der Grünräume nicht möglich. Ich weiß nicht ob ihr euch bereits beschäftigt habt, aber es gibt das Fachkonzept Grün- und Freiräume und dort stehen auch die sog. Regionskennwerte drinnen. Das bedeutet man muss innerhalb von 6 km einen Grün- und Freiraum erreichen und dies wäre gerade für die Bereiche nördlich der Donau ohne die Donauinsel gar nicht möglich. Denn sie ist eben der große Erholungsraum ist und Wasser ist natürlich für Städte das große non plus ultra. Siedlungsgebiete haben sich immer entlang von Flüssen entwickelt und so gesehen ohne Donau gebe es Wien gar nicht. Von dem Standort ist die Donau etwas Einmaliges und schon langsam entwickelt sich Wien in die Richtung, dass wir nicht links und rechts der Donau, sondern an der Donau sind. Die Donau ist jetzt wirklich auch in Wien angekommen.

Q2: Wie wirkt sich die Donau auf die Lebensqualität aus und welche konkreten Auswirkungen hat sie?

A2: Sie wirkt sich dadurch aus, dass es die Freizeiträume gibt und was man nicht vergessen darf sind die klimatischen Auswirkungen von der Donau. Die Donau ist die wichtigste Frischluftschneise in Wien. Dass mag man als BesucherIn oder als NutzerIn durch das verblissen werden als nicht ganz so toll empfinden, aber für das Klima ist es ein wahnsinniger Vorteil. So wie heute z.B.. Wenn man aus dem Fenster sieht: Es hält sich der Nebel, trotzdem haben wir in Wien auch Dank der Donauschneise relativ wenige Smogprobleme so wie es sie z.B. in Graz gibt. Diese Stadt ist eingekesselt. Bei uns hingegen zieht es eigentlich entlang der Donau recht gut durch. Außerdem ist ein Wasser einfach immer ganz toll und was man auch nicht vergessen soll und das ist jetzt eure Frage in Richtung der Lebensqualität: Die Donau ist durchaus auch ein Wirtschaftsfaktor und das wirkt sich dann im Rückschluss auch auf die Lebensqualität aus, weil die Donau durchaus auch noch Arbeitsplätze bietet

Q3: Der zentrale Inhalt unserer Studie ist, herauszufinden wie groß der Beitrag von Gewässern zur Verbesserung der Lebensqualität in Städten ist und deswegen ist das Folgende unsere zentrale Fragestellung: Wie groß ist der Beitrag der Donau auf einer Skala von 1-10 Wien zur lebenswertesten Stadt der Welt zu machen?

A3: Das ist relativ schwierig, weil wir es nicht nach diesen Kriterien beurteilen. Da es noch ganz ganz viele andere Sachen gibt, hätte ich einmal aus dem Bauch raus eine 7 gesagt, weil neben der Donau auch noch die Kultur ein sehr sehr starker Einflussfaktoren ist und auch die soziale Infrastruktur bei uns in Wien ein sehr großer Punkt ist, der die Lebensqualität beeinflusst.

Q4: Und wenn Sie das nun in Prozent angeben. Wie viel Prozent macht die Donau in Wien aus?

A4: Zuerst einmal ohne Donau wäre die Stadt ganz einfach nicht da. Es gibt natürlich auch andere ganz wichtige Punkte und der Anteil ist sehr schwierig auszumachen. Weil es eben so viele Dinge gibt und das dann in Prozent festzumachen ist sehr schwierig. 30 % hört sich sehr wenig an, andererseits wäre es aber auch ein Drittel am Ganzen. Das wäre bereits ein Wahnsinn. Trotzdem ist es für mich einfach sehr schwierig einzuschätzen wie groß der Beitrag der Donau ist. Auf einer Wichtigkeitsskala von 1-10 würde ich die Donau mit der Wichtigkeit 7 einschätzen. Wie viel Prozent am Gesamten das aber ist, kann ich wirklich nicht einschätzen. Es lässt sich von der Komplexität einfach nicht begreifen.

Q5: Aber Sie würden die Donau als zentralen Faktor für die Lebensqualität in Wien definieren?

A5: Die MA18 ist leider nicht für die Donau zuständig. Ich weiß nicht ob ihr euch bereits damit beschäftigt habt, was Stadtplanung macht. Wir haben sehr viele übergeordneter Geschichten. Wir haben das übergeordnete Gesamtbild auf Wirtschaft und so weiter und die gesamte Versorgung im Blick, aber auf die einzelnen Punkte im Gesamten sehr wenig

Einfluss. Wir versuchen sie immer wieder zu beachten und die Leute auf die Wichtigkeiten hinzuweisen, aber wir können auf die Donau keinen Einfluss nehmen. Die Donau ist auch in Bundesverwaltung. Wir empfinden sie als extrem wichtig, aber es ist dieser Ausgangspunkt: Ohne die Donau würde es Wien nicht geben und daher ist die Donau sehr wichtig. Aber im Gesamtkonglomerat, das die Stadt Wien ausmacht...

- Q6: Aber abgesehen davon, dass es ohne die Donau Wien gar nicht geben würde: Nehmen wir an die Donau würde von heute auf morgen nicht mehr existieren. Sagen wir die Donau wäre einfach ausgeschaltet. Wäre Wien dann noch die lebenswerteste Stadt der Welt oder nicht?
- A6: Ich habe mir das so durchgedacht: Wenn die Donau nicht mehr da wäre, dann wäre schon etwas Gewaltiges passiert und dann wäre dies wahrscheinlich unser kleinstes Problem. Global betrachtet, wenn es die Donau nicht geben würde, dann wäre die Vegetation hier auch ganz anders. Es wäre eine riesige Naturkatastrophe, wenn die Donau nicht mehr da wäre. Dann denke ich mir: Die Lebensqualität in ganz Europa wäre eine andere wir beschäftigen uns nicht mehr damit. Im Sinne von Versickern: Versickern wie Ströme in Afrika wird die Donau hoffentlich nicht. Würde sie es doch, würde die soziale und kulturelle Infrastruktur noch immer bestehen, aber es wäre sicher ein gravierender Einschnitt. Und wenn es die Donau nicht mehr gibt, dann wäre dies wahrscheinlich unser kleinstes Problem.
- Q7: Es geht schließlich nur um das Szenario.
- A7: Dieses Szenario ist für mich einfach so abstrakt, aber es geht nicht darum, dass ich den Fluss jetzt ein Stück weiter weg verlege, sondern wenn er einfach nicht mehr da wäre. Dann hätten wir rundherum keine Landwirtschaft mehr, keine Wälder. Die Lebensqualität von MERCER bezieht sich ja nicht auf den Grünraum, sondern da geht es mehr um die technische Infrastruktur, um Kulturmaßnahmen usw. Und da ist glaube ich die Natur der Background, ein „Nice to have“ und auf die Studie wird es sehr wenig Einfluss haben, wobei dann alles andere an Wichtigkeit gewinnt.
- Q8: Meinen Sie, dass in der MERCER-Studie Wien, trotz einer ausgeschalteten Donau, noch immer auf Platz 1 wäre oder wäre Wien dann auf eine hintere Platzierung abgerutscht.
- A8: Es lässt sich für mich einfach nicht aufgrund der Banalität dieser Frage für mich einfach nicht einschätzen, denn Wien als Stadt gäbe es einfach nicht, wenn es den Fluss nicht gäbe. Wenn der Fluss jetzt einfach weggenommen wäre, dann hätte sich die Stadt anders entwickelt. Die meisten Großstädte liegen einfach an einem Gewässer und sind aus einem nicht so trivialen Grund, weil es das Wasser gibt, dorthin gebaut worden und das, das MERCER einfach betrachtet, das sind die anderen Sachen. Wie sich die Stadt entwickeln würde, wenn es den Fluss nicht gäbe. Da kann ich einfach nur sagen: Die Stadt würde es einfach nicht geben ohne den Fluss.
- Q9: Das ist mir schon klar. Ebenso wie das, dass sich die meisten Städte entlang von Flüssen entwickelten. Trotzdem haben sich die meisten Städte weltweit den Fluss nicht so als integriertes Handlungsfeld umgebaut. Durch die Donauregulierungen haben wir eine Donauinsel. Wir haben einen Donaukanal, wir haben Schiffsverkehr, wir haben Hochwasserschutz, wir haben Energieversorgung etc. Um das Szenario weniger abstrakt zu machen: Sagen wir die Donau wäre noch immer in dem Zustand in dem sie vor der ersten oder zweiten Donauregulierung war. Wäre Wien noch immer die lebenswerteste Stadt der Welt.
- A9: Neben der Tatsache, dass die Donau nicht unbedingt mein Spezialgebiet ist, vergleiche ich es jetzt z.B. mit München da ist die Isar auch ein zentrales Erholungsgebiet und diese ist ähnlich integriert wie die Donau bei uns, wobei man hier anmerken muss, dass die Isar natürlich einiges kleiner ist als die Donau. Man kann es auch mit dem Rhein in Köln vergleichen. Dort sind auch die Erholungsflächen am Fluss gelegen und es gibt auch ähnliche Rivalitäten zwischen östlich und westlich des Rheins wie in Wien zwischen Transdanubien (nordöstlich der Donau) und Cisdanubien (südwestlich der Donau) Von diesen identifikationsmerkmale her sind sie sich sehr ähnlich. Und dann gibt noch den Unterschied: Wir sind jetzt im 21. Jahrhundert. Die Donauregulierung war im 19. Jahrhundert. Der Lebensstandard ist ein anderer. Ich habe eure Frage gelesen und habe mir gedacht: „Tut mir leid. Die kann ich nicht beantworten“.
- Q10: Wie schätzt die MA18 die Priorität der Donau ein, auch wenn es nicht ganz in ihrem Zuständigkeitsbereich liegt. Wenn man es jetzt mit anderen Entwicklungshotspots in Wien vergleicht wie z.B. soziale Entwicklung oder kulturelle Entwicklung (Ich weiß logischerweise nicht genau welche Projekte Sie jetzt anstehen haben). Ist die Donau sehr wichtig für die Stadt Wien oder hat sie eher geringe Priorität?
- A10: Sie ist eher da und wir entwickeln uns rundherum. z.B. auch in die gegenteilige Richtung, dass sie nicht zu sehr zugebaut wird. Aber die Donau ist ein ganz ein anderes Entwicklungsfeld als z.B. die Seestadt oder das Gebiet rund um den

Hauptbahnhof. Es sind durchaus gleichwertige Gebiete, die aber ganz anders zu betrachten sind. Es gibt die Donaunahestrategie und eine eigene Stelle in der Baudirektion, die sich mit der Donaunahestrategie beschäftigt. Die Donau ist besonderes, aber kein Entwicklungsgebiet auf das die MA18 wirklich Einfluss hat im Gegensatz z.B. zur Seestadt oder dem Gebiet rund um den Hauptbahnhof. Dort reden wir sehr viel mit als MA18, aber über Sachen entlang der Donau weniger. Es gibt da solche Sachen wie Seegebiete oder der Donaukanal, da haben wir auch etwas zu sagen. Ich selber weiß nicht ob der Donaukanal derzeit noch zu den Zielgebieten gehört. Er war eine lange Zeit ein Zielgebiet, wo es darum ging die Freizeit- und Erholungsmöglichkeiten ein bisschen mehr zu regulieren, dass dort kein allzu großer Wildwuchs mehr ist. Damit alle Nutzergruppen auch etwas davon haben, sodass z.B. nicht ein Lokal neben dem anderen entsteht. Ich denke, im Endeffekt ist die Donau sehr gleichwertig.

Q11: Wenn Sie als MA18 die Donau entwickeln, in den wenigen Bereichen für die Sie zuständig sind, wo werden da die Prioritäten gesetzt. Eher im wirtschaftlichen Bereich oder geht es um da um die Energieversorgung oder wollen Sie eher darauf schauen, dass noch mehr Grüngelände entstehen, mehr Grünflächen entstehen?

A11: Das sind die Entscheidungen, die meistens außerhalb unseres Bereichs getroffen werden. In Kleinbereichen schauen wir, dass wir ihr die Anwohnerschaft vertreten. Die Wirtschaft kann sehr gut für sich selber reden. Die NutzerInnen, die die Freizeitmöglichkeiten nutzen. Da sehen wir uns als das Landschaftsplanungsreferat als Anwälte dieser Leute um das Nutzungsspektrum freizuhalten. Die kommerzielle Freizeitnutzung kann sich recht gut selber vertreten. Dies gilt aber nur für das Landschaftsplanungsreferat. Andere Referate sehen das vielleicht wieder anders, aber auch in der MA18 sind immer wieder Interessensabwägungen und Diskussionen da, in welche Richtung es gehen soll.

Q12: Haben Sie in ihrer Funktion für die MA18 bereits Erkenntnisse gesammelt zum Zusammenhang zwischen Wasser und Lebensqualität?

A12: Es hat einmal klimatische Auswirkungen. In der Nähe von Wasserflächen ist es immer kühler. Wo Wasser vorhanden ist, wachsen Pflanzen schneller und auch da ist wieder Kühlung durch die Pflanzen vorhanden. Psychologisch gesehen hat das Wasser auf den Menschen eine sehr beruhigende Wirkung außer natürlich im Falle von Hochwasser, da ist aber in Wien durch die Hochwassermaßnahmen unwahrscheinlich. Wir sind vor Hochwasser sehr sicher und diese ambivalente Einstellung zum Wasser in Wien zugunsten der Freizeitnutzung bringt etwas. Und wenn man den Immobilienmarkt anschaut wird sehr gerne auch mit Grünblick, aber auch mit Gewässerblick wesentlich teurer verkauft. Also hat Gewässer auch einen wirtschaftlichen Faktor aber vor allem klimatisch gesehen ist Wasser ein sehr großer Vorteil.

Q13: Und jetzt im Bezug zu Wasser den herumliegenden Grüngeländen und Lebensqualität?

A13: Die teuersten Grundstücke sind die, die an der Alten Donau liegen. Da sind wir immer wieder im Abwägen zwischen den Persönlichkeitsrechten Einzelner und dem Ziel, dass die Donau allen frei zugänglich bleibt und das ist eben auch entlang der Alten Donau besonders wichtig. Wenn man in den 22. Bezirk schaut, dass das Wasser dort auch immer wieder frei zugänglich bleibt und für den Einzelnen ist es natürlich schön, aber für die Gemeinschaft ist es gut wenn nicht alles zugebaut wird und privatisiert ist.

Q14: Kommen wir zum Bereich Integration der Donau: Denkt Sie als Vertretung der Stadt Wien, dass die Donau gut in Wien integriert ist und dass die Stadtplanung von Wien in den letzten Jahrzehnten in diesem Bereich gute Arbeit geleistet hat?

A14: Ich glaube das Pionierprojekt war wirklich die Donauinsel selber. Damals in den 70er oder und 80ern gab es noch die Überlegung das die Donauinsel wie Manhattan bebaut wird und eine Art Mini-Manhattan entsteht. Ich glaube von den Vorvätern im Landschaftsplanungsreferat hier wurde sehr gute Arbeit geleistet. Auch im Bezug zur Lebensqualität haben sie darum gekämpft, dass es grün bleibt oder grün wird und ich glaube es hat sich in den letzten Jahrzehnten immer mehr zur gemeinsamen Fläche entwickelt, die Donau und die Donauinsel.

Q15: Könnte die Donau irgendwo besser integriert sein? Gibt es in verschiedenen Bereichen Verbesserungsmöglichkeiten?

A15: Es ist ein zweiseitiges Schwert: Die Querungsmöglichkeiten vom 21. und 22. Bezirk zum Rest der Stadt sind relativ dürftig, weil es halt eben nur einige wenige Punkte gibt, wo es Querungsmöglichkeiten über die Donau gibt. Andererseits würden mehr Querungsmöglichkeiten den Raum wieder stören. Das ist dann immer das Abwägen von mehr Querungsmöglichkeiten und mehr Nutzungsfläche. Die Anbindung könnte in manchen Bereichen vielleicht besser sein, aber das hat eben auch mit Zugänglichkeit privater Grundstücke zu tun. Wo wir gerade ein bisschen dabei sind: Entlang vom Handelskai, der sich ja entlang des ganzen 2. und 20. Bezirks zieht gibt es einige Bauprojekte, die in Diskussion sind und in diesen Diskussionen ist immer wieder ein Punkt Verbindungsmöglichkeiten zu schaffen an die Donau. Es geht ja

auch eine Bahnlinie noch vorbei am Handelskai und da gibt es auch relativ wenige Zugangspunkte. An den Zugangspunkt könnte man vielleicht noch arbeiten, wobei das dann aber auch mit Verbesserungen der Nutzbarkeit an der Donau einhergehen müsste, weil gerade in den Bereichen wo die Zugänge geschaffen werden, ist eigentlich relativ wenig Fleisch entlang der Donau. Das sind oft sehr schmale Flächen, dort wo die Zugangspunkte geschaffen werden. Dort müsste man dann auch in puncto Grün- und Nutzflächen eigentlich Verbesserungsmaßnahmen treffen.

Q16: Kommen wir zum Thema der Nutzen der Donau für die Stadt Wien, ganz ohne die Nutzung für den Menschen betrachtet. Was bringt der Stadt Wien am Allermeisten an der Donau?

A16: Der Donauwalzer... Die Donau ist international von Interesse. Dadurch, dass der Donauwalzer z.B. bei jedem Neujahrskonzert gespielt wird, wird der Eindruck initiiert: „Wien an der schönen blauen Donau“. Der Donauwalzer ist ein Vermarktungslogan, der sich seit, ich weiß zwar nicht die genauen Daten, aber etwa seit 150 bis 200 Jahren durch die Geschichte Wien zieht. Die Tatsache, dass die Donau da ist, bringt der Stadt am meisten und eben auch, dass es vor vielen Jahren einen Komponisten gegeben hat und dass es auch ein paar geniale Maler gegeben hat, die das Lied dann unterstützt haben mit einem Bild, das weltweit transportiert wird.

Q17: Ist es der Tourismus, der der Stadt am meisten bringt?

A17: Es ist der Tourismus. Das gibt der Stadt ein gewisses Image. Für die Stadt ist es die Wirtschaft. Es gibt auch Güterverkehr an der Donau. Zusätzlich ist der Tourismus ein Faktor. Es ist außerdem der Freizeiterholungswert, der jetzt immer nutzbarer wird. Auch wenn man versucht den eigenen Leuten gegenüber die Donau zu vermitteln, dann schwingt schon immer dieses; „An der schönen blauen Donau“ mit.

Q18: Besitzt der Tourismus höheren wirtschaftliche Nutzen als die Geschäfte entlang der Donau indirekt durch Steuereinnahmen?

A18: Etwas, das nicht zu unterschätzen ist: Von der Wirtschaft wird die Donau als Gütertransportweg benutzt. Der Hafen von Wien ist jetzt ausgebaut worden und auch die Wasserstraße, dieses reine technische Ding, ist ein Wirtschaftsfaktor, der zumeist einem nicht so bewusst ist, aber durchaus vorhanden ist. Das ist mit dem Tourismus wichtig für Wien, also die Geschäfte, die direkt an der Donau liegen, sind jetzt gar nicht so der große Geldbringer, sondern die Schifffahrt. Der Hafens, der zu Einer der Größeren zählt, obwohl wir keinen Meeres Hafen haben, ist nicht von der Hand zu weisen.

Q19: Also Sie würden den allgemeinen wirtschaftlichen Nutzen für die Stadt Wien höher als den sozialpolitischen Nutzen stellen?

A19: Das Faszinierende an der Donau, ist das Gesamtpaket, alles unter einen Hut zu bekommen. Ich glaube es ist insgesamt eine sehr gute Interessensabwägung, von allen miteinander und es gibt einige Flüsse, wo dieses Verhältnis nicht so ausgeglichen ist: Das Verhältnis zwischen Wirtschaft, der lokalen Wirtschaft und den sozialen Interessen.

Q20: In unserer Studie gaben 30% der Menschen an das alle Nutzen für die Stadt Wien gleichbedeutend sind.

A20: Ja, ich glaube schon, dass alles sehr gut aufeinander abgestimmt ist.

Q21: Welcher Nutzen der Donau nützt den Menschen jetzt am meisten, welcher Faktor der die Lebensqualität beeinflusst, ist der Wichtigste für den Menschen.

A21: Ich denke, dass es der Grünraum ist. Einerseits wegen der Nutzbarkeit, andererseits wegen der klimatischen Auswirkungen durch die Grün- und Blauflächen.

Q22: Ist es eher der Sport oder die Möglichkeit zur Erholung oder sind es die kulinarischen Angebote, die den Menschen nützen?

A22: Ich glaube es ist das Gesamtpaket, das es einfach ausmacht, weil ich alles entlang der Donau habe. Wenn nur ein Spektrum bedient wäre, wäre es nicht so spannend.

- Q23: Wenn Sie die Donau in Wien mit Flüssen anderer Städte weltweit vergleichen, aber nur im Bereich der Erholungsmöglichkeiten. Wo würde Wien da im Ranking liegen?
- A23: Da habe ich zu wenig Überblick, weil nahezu alle Großstädte über einen Fluss verfügen und ich nur ein paar deutsche Beispiele kenne. Das kann ich nicht einschätzen.
- Q24: Und aus dem Bauch heraus? Ist Wien mit der Donau gut? Mittelmäßig? Oder eher schlecht in diesem Ranking?
- A24: Es gibt sicher einige, die es besser machen, aber viele die es schlechter machen. Also sind wir, wahrscheinlich im oberen Drittel rein aus dem Bauch geschätzt. Ich habe um die Frage fundiert zu beantworten zu wenig Wissen über die anderen Städte weltweit.
- Q25: Und wenn die Sie nicht nur den Bereich Erholungsmöglichkeiten, sondern die Donau als Gesamtpaket in Wien mit dem Gesamtpaket der Flüsse anderer Städte vergleichen. Ist die Donau in diesem Ranking besser oder schlechter oder auf einer ähnlichen Position?
- A25: Ich bin mir ziemlich sicher, dass wir im oberen Drittel sind mit dem was wir leisten. Oberes Viertel wage ich nicht zu behaupten. Es ist möglich, dass wir unter den Top 10 sind. Über das obere Drittel bin ich mir ziemlich sicher, aber ohne wissenschaftliche Grundlagen keine fundierte Antwort.
- Q26: Auf einer Skala von 1 bis 10: Wie bewertet die Stadt Wien die Vielfältigkeit der Nutzung der Donau. Z.B. für Hochwasserschutz, für Energieversorgung, für Erholungsmöglichkeiten, für Sport oder als wichtige Schiffsverkehrsweg etc.
- A26: Ich glaube, dass das Kombipaket auf einer Skala von 1 bis 10 durchaus bei 9 ist.
- Q27: Könnte die Donau noch vielfältiger genutzt werden, d.h. könnte Wien 10 erreichen?
- A27: Es kommen immer wieder neue Ideen dazu. Man könnte am Nutzungsmix sicher noch etwas herumschrauben um auf 10 zu kommen. Aber nur Kleinbereichen. Aber sonst ist es eigentlich ganz gut so, wie es derzeit ist.
- Q28: Welche Schrauben wären das im Nutzungsmix?
- A28: Ein bisschen mehr Grünflächen schaffen als befestigte Flächen. Ein Sporthafen an der Donau in Wien ist sicherlich sehr toll, aber vielleicht könnte er auch woanders sein als inmitten eines der dicht bewohnten Ufer und vielleicht wäre dann dort eine grünere, naturnähere Nutzung möglich oder die breite Freizeitnutzung besser.
- Q29: Ich nenne jetzt eine Schraube die Perfektion mit der die Grünflächen gemacht wurden. Müsste man an dieser Schraube noch drehen? Wurden die Grünflächen wirklich gescheit gestaltet oder gibt es in diesem Bereich auch noch Verbesserungsmöglichkeiten?
- A29: Gerade die Gestaltungssachen sind immer eine sehr diffizile Angelegenheit. Es hängt immer davon ab, wie viel NutzerInnen auf einer Fläche drauf sind. Man könnte meistens sehr viele Sachen sehr viel grüner machen. Die Frage ist nur ob sich das Grün dann hält, denn mit einem gewissen Nutzungsdruck ist eine Wiese irgendwann nicht mehr grün, sondern ein Staubfeld und im Regen dann ein Schlammfeld. Meistens ist es sehr der jetzigen Nutzung angepasst, das Verhältnis aus befestigten und unbefestigten begrünten Flächen. Wenn man den vorher erwähnten Sporthafen dort wegbekommen würde, gäbe es natürlich ein erhöhtes Begrünungspotential.
- Q30: Auf einer Skala von 1 bis 10: Wie bewertet die MA18 die Angebote entlang der Donau?

- A30: Ich tue mir sehr schwer mit solchen Skalen. Da muss man auch Sachen miteinbeziehen, die wir uns hier gar nicht vorstellen können. Trotzdem bleibe ich auch hier bei einer 9, da es entlang der Donau wirklich wahnsinnig viel gibt. Etwas könnte vielleicht doch besser sein, auch wenn ich nicht genau feststellen kann, was das ist.
- Q31: Wissen Sie welche Angebote den Menschen am besten gefallen und welche besonders gefördert werden?
- A31: Es gibt ja jetzt von der MA45 die sogenannte Inselinfo und dort gibt es auch einen sehr guten Überblick über was es alles gibt. Man schaut, dass möglichst viele unterschiedliche Möglichkeiten existieren, denn Menschen sind so unterschiedlich und haben sehr unterschiedliche Nutzungsansprüche und Bedürfnisse. Was sehr wichtig ist, aber nicht immer erfüllbar ist, ist Barrierefreiheit. Ein weiteres großes Thema sind auch die WCs, wobei es hier auch laufende Verbesserungen gibt und auch die Wasserentnahmestellen auf der Insel selber werden sind ein Thema.
- Q32: Auf einer Skala von 1 bis 10: Wie bewertet die Stadtplanung die Vielfältigkeit der Angebote, die die Donau den Menschen bietet.
- A32: Ich würde die Angebote durchwegs mit einer 9 bewerten. Natürlich gibt es auch hier Wünsche und Ideen. Das muss man aber dann auch mit anderen Interessen abwägen. Luft nach oben möchte ich trotzdem noch lassen.
- Q33: Auf einer Skala von 1 bis 10: Wie bewertet die MA18 die Qualität der Angebote? Ist diese auch bei einer 9?
- A33: Ja.
- Q34: Jetzt haben wir sehr viel darüber gesprochen, dass wir mehr Grünflächen wollen und auch möglichst viele Freizeitmöglichkeiten haben wollen. Wie hoch ist bei all den Maßnahmen die Priorität für die Naturfreundlichkeit?
- A34: Der Anfang und das Ende der Donauinsel sind naturnahe Bereiche, wo relativ wenig gemacht wird und auch die Gehölzflächen im Zentralbereich sind sehr naturnah gestaltet. Wenn man Naturfreundlichkeit jetzt im Sinne von Nachhaltigkeit und natürlichen, naturnahen Bereichen definiert, dann sind es diese Randbereiche (Anfang und Ende der Donauinsel) mit kleinen Inseln zwischendurch. Es gibt auch diese kleinen Biotop. Das Donauinselfest ist vielleicht nicht sehr naturfreundlich. Es ist aber auch nicht der Anspruch vom zentralen Bereich, der den Bereich von der Floridsdorfer Brücke bis zur Reichsbrücke umfasst. Vom Mittelteil mit der „Copa Cagrana“ ist es auch nicht der Anspruch den dieses Gebiet hat. Für den mittleren Bereich würde ich Naturfreundlichkeit jetzt bei 6 sehen. Dafür ist die Naturfreundlichkeit am Anfang und am Ende, die letzten Kilometer, bei 10. Und der Rest liegt irgendwo dazwischen.
- Q35: Und über den Gesamtbereich gesehen?
- A35: Dann sind wir, wenn man berücksichtigt, dass man in der Mitte nicht unbedingt naturfreundlich sein will, bei einer 9.
- Q36: Möchte man in Zukunft naturfreundlicher sein, auch bedingt durch das Aufkommen der sog. Klimadiskussion?
- A36: Wir brauchen halt ganz einfach diese Flächen für die härteren, befestigten Nutzungen und da bietet dieser Bereich zwischen Floridsdorfer Brücke und Reichsbrücke auch an, weil dieser auch öffentlich irrsinnig gut erschlossen ist und es dort mehr befestigte Flächen gibt. Es geht auch im Sinne der Reduzierung der Pflegekosten darum dort auch einfach angepasster zu sein. Es gibt immer weniger Niederschläge und wenn sie kommen, kommen sie sehr kompakt. Da kann vor allem die Inselinfo Informationen geben, denn wir sind am Geschehen nicht so dran.
- Q37: Hat es die Stadt Wien geschafft die Donau gleichzeitig naturfreundlich und wirtschaftlich zu integrieren? Wenn Sie sagen die Naturfreundlichkeit ist bei einer 9. Kann die Wirtschaftsfreundlichkeit dann auch bei einer 9 sein?
- A37: Ich glaube schon, denn die wirtschaftliche Integration meint nicht unbedingt, dass man die Entwicklungen vor Ort machen muss. Durch die öffentliche Anbindung an den Rest der Stadt oder die wirtschaftlichen Hotspots habe ich natürlich auch den Vorteil, denn mir die Donau als Erholungsraum bietet. Auch der Manager möchte irgendwo die Seele baumeln lassen. Manche sind sogar die, die durch die Donau in die Arbeit schwimmen. Es gibt einen, der durch die Donau in die Arbeit geht und ich glaube, dass die wirtschaftlichen Interessen mit den Naturinteressen gut abgewogen sind.

- Q38: Welchen Stellenwert hat die Wirtschaft bei Stadtplanerischen Tätigkeiten in Bezug zur Donau?
- A38: Sie ist einer von vielen Playern. Es wird versucht, wenn irgendetwas von wirtschaftlichem Interesse ist, auch wieder auf Ausgleichsmaßnahmen zu schauen. Auf der Donauinsel sollte keine bauliche Verdichtung mehr stattfinden. Aber an den Donauufeln findet etwas statt und dann wird immer wieder von Seiten der Stadtplanung, im Sinne des Interessenausgleichs, geschaut, dass dort eine Verbesserungsmaßnahme in Richtung Freizeit stattfindet. Die Wirtschaft ist einer von vielen Playern.
- Q39: Dann sind wir eigentlich schon fast am Ende. Welche Verbesserungsmöglichkeiten gibt es? Die Teilnehmer unserer Umfrage gaben an, dass vor allem die Verbesserung der Infrastruktur, insbesondere im Bereich Anbindung mit öffentlichen Verkehrsmitteln und im Bereich der Brücken stattfinden soll. Außerdem wünschen sie sich eine sauberere Donau. Die Teilnehmer sahen sehr viel Verschmutzung an der Donauinsel etc. Mehr Grünflächen und qualitativ hochwertiger Angebote wurden auch gewünscht.
- A39: Zur Verschmutzung muss man sagen: Nehmt euch teilweise selbst an der Nase, nutzt die Mistkübel, die euch zur Verfügung stehen. Mancher Dreck und das mit dem Öl an der Donauinsel und auf der Donau vor kurzem liegt außerhalb unseres Einflussbereichs. Und mit den Brücken ist es dieses zweischneidige Schwert, dass ich eh schon einmal erwähnt habe. Wenn mehr Brücken über die Donau gehen, dann ist der Raum auch weniger erlebbar. Weil der Raum auch unterteilt wird. Man sieht es auch sehr gut zwischen der U6-Brücke und der Floridsdorfer Brücke. Das ist ein relativ schmaler Abschnitt und da sieht man die Qualität, die sich zwischen den beiden Brücken schaffen lässt ist wesentlich geringer als man in größeren Abschnitten zwischen Brücken schaffen kann. Im Hinblick auf die Erreichbarkeit der Ufer wird durchwegs etwas getan. Dort ist es auch dieses: „Grün vs. Haltbarkeit“. Die Grünflächen halten sich bei starkem Nutzungsdruck nicht so gut. Befestigte Flächen halten es eher aus, dass mehr NutzerInnen dort sind.
- Q40: Welche Projekte stehen in Zukunft für die Donau an?
- A40: Keine Ahnung. Für die Donau selber sind jetzt keine großen Sachen geplant. Die MA45 arbeitet natürlich laufend an der Verbesserung der Nutzbarkeit der Donauinsel, also z.B. am Ausbau des WC-Konzepts und der Trinkwasserangebote und auch das Müllkonzept ist, glaube ich, gut.
- Q41: Ist der Stand: „Die Donau passt uns eigentlich recht gut so wie sie ist“?
- A41: Sie passt sehr gut so wie sie jetzt ist und man muss auch immer schauen, wenn neue Interessen herangetragen werden, dass man im Sinne wie wir es bis jetzt auch gemacht haben auf Interessenausgleich schaut und tatkräftig mitarbeitet, dass alle Interessen gegenseitig gehoben werden.
- Q42: Noch ein kleiner Ausblick auf die Zukunft: Welchen Stellenwert wird die Donau in Zukunft für Wien und die Stadt Wien haben? Wird er größer? Wird er kleiner? Die Lebensweise verändert sich. Man kann annehmen, dass Menschen in Zukunft mehr Stress ausgesetzt sind. Sie suchen nach mehr Ausgleich. Wird die Donau dann wichtiger werden für die Menschen?
- A42: In dem Sinne und auch mit der Erderwärmung wird die Donau noch mehr Zuspruch bringen, was aber auch wieder neue Herausforderungen bringen wird. Noch mehr Grünflächen und Schattenbereiche zu schaffen und die Zugänglichkeit am Ufer zu schaffen. Und ich denke, dass die Menschen in Zukunft mehr in Richtung Wasser gehen werden und so dann andere Interessen abgewogen werden können.
- Q43: Zum Abschluss: Wird Wien auch nächstes Jahr noch lebenswerteste Stadt der Welt sein?
- A43: Wir glauben, wir hoffen, wir wissen es sogar fast. Ich glaube schon, dass wir sehr viel gut machen und wir hoffen, dass wir nächstes Jahr wieder lebenswerteste Stadt sind und im Ranking wieder vorne liegen. Aber auch ein Platz 2 wäre nicht so schlimm. Aber ich glaube wir behalten unseren Platz 1...

7.2. Shortened English Interview

Q...Question by the interviewer, A...Answer by Ms.Maschat

Q1: Does the Danube affect the quality of life?

A1: The Danube Island (originally built for flood protection) is a connecting area between the northern and the southern development areas. Because of the urban areas and the small nature reserve, it has an incredible range of leisure and nature possibilities. The concept "Grün- und Freiräume" (Green and free zones) would not be possible without the Danube Island. It is the large relaxation area for the city and the water is non plus ultra.

Q2: How does the Danube affect the quality of life and what specific effects does it have?

A2: This can be attributed to the leisure areas and the climatic effects. Because of the Danube fresh air corridor, there are almost no smog problems. The wind flows well along the river. The Danube is also an economic factor and offers jobs opportunities.

Q3: How big is the contribution of the Danube to making Vienna the most livable city in the world on a scale of 1-10?

A3: 7, because the culture and social infrastructure are also strong factors influencing quality of life.

Q4: To what percentage does the Danube make up Vienna?

A4: The city wouldn't be there without the Danube. There are other contributing factors as well. I can not rate it.

Q5: Would you define the Danube as a central factor for the quality of life in Vienna?

A5: MA18 is not in charge for the Danube. We cannot influence the Danube, but Vienna would not exist without the Danube.

Q6: Let's say the Danube would just be gone. Would Vienna still be the most liveable city in the world or not?

A6: It would be a huge natural disaster if the Danube no longer exists. Even if the Danube seeped away, the social and cultural infrastructure would still exist, but there would certainly be a significant reduction.

Q7: It's just about the scenario.

A7: Then we would have no agriculture all around Danube, no forests. MERCER's quality of life study does not refer to the amount of green space, but to the technical infrastructure, cultural measures, etc.

Q8: Do you think that Vienna would still be in first place in the MERCER study, despite the disappearance of the Danube, or would Vienna have slipped to a the rear?

A8: I can only say: The city would simply not exist without the river.

Q9: Let's say the Danube would still be in the state it was in before the first or second Danube regulation. Would Vienna still be the most livable city in the world?

A9: In comparison to Cologne, there are also recreation areas on the river and similar rivalries between the east and west of the Rhine exist, as in Vienna between Transdanubia and Cisdanubia. The cities are very similar in terms of these identifying features. Besides, we are now in the 21st century. The Danube regulation was in the 19th century. The standard of living is different.

Q10: Is the Danube very important for the city of Vienna or does it have a low priority?

A10: Although the Danube is special, it is not a development area on which the MA18 really has influence. It is there and we develop around it. There is the Danube Canal to which we have something to say. It was a targeted area for a long time, where the leisure and recreational opportunities are regulated so that all user groups benefit from it, so that e.g. not one Restaurant is built next to the other. In the end, I think the Danube is equivalent to the other projects.

Q11: If the Danube is in the few areas for which the MA18 is responsible, where are the priorities set? In economy or in energy generation or in creating more green spaces?

A11: The decisions are mostly made outside our area of responsibility. We represent the residents. We see us as the landscape planning department and as lawyers for users who use the leisure opportunities. Commercial recreational use can represent itself quite well, but this only applies to the landscape planning department. Other departments may see it differently, but MA18 consistently weighs up interests and discusses which direction it should take.

Q12: While working for MA18, have you already gathered knowledge about the connection between water and quality of life?

A12: Water is a huge economic and climatic advantage. It is cooler near waters. Where there is water, plants grow faster. The plants in return cool the surrounding area as well. Psychologically speaking, water has a calming effect on people. In the real estate market, houses with green views and water views are more expensive.

Q13: And in relation to water, the surrounding green areas and the quality of life?

A13: The most expensive properties are on the Old Danube. There are trade-offs between the personal rights of individuals and the goal that the Danube remains freely accessible to everyone. It's nice for the individual, of course, but it's good for the community if not everything is built up and privatized.

Q14: As the representative of the City of Vienna, do you think that the Danube is well integrated into Vienna and that urban planning in Vienna has done a good job in this area in recent decades?

A14: The pioneer project was the Danube Island itself. In the 1970s and 1980s, the idea of building on Danube Island like Manhattan was considered. Landscape planning department did a very good job. They fought to keep it green. In the past few decades, the Danube and the Danube Island have increasingly developed into a common area.

Q15: Could the Danube be better integrated anywhere? Are there room for improvement in various areas?

A15: It's a double-edged sword: the crossing possibilities are poor, but more would disturb the balance. We must weigh up more crossing options and more usable space. One could still work on more points of access, but this would also have to go hand in hand with improvements in usability on the Danube, because there is actually relatively little free place along the Danube in the areas where the accesses are created. These are often very narrow areas where the access points are created. There one would actually have to take improvement measures in terms of green and usable areas.

Q16: Without considering the use for humans: What does the Danube bring to the city of Vienna the most?

A16: The Danube is of international interest. The Donauwalzer (Danube waltz) is a marketing slogan in that it e.g. is played at every New Year's concert. The fact that the Danube is there brings the city the most.

Q17: Is it tourism that brings the city the most?

A17: It's tourism. That gives the city a certain image. For the city, it's the economy.

Q18: Does tourism have greater economic benefits than businesses along the Danube indirectly through tax revenue?

A18: The shops that are located directly on the Danube are not so big money-makers, but shipping is. The Danube is used by the economy as a freight transport route. It should not be underestimated: the port of Vienna has now been expanded and the waterway, this purely technical thing, is also an economic factor.

Q19: Would you place the general economic benefit for the city of Vienna above the socio-political benefit?

A19: The fascinating thing about the Danube is the complete package. Overall, it is a very good balance of interests: the relationship between the economy, the local economy and social interests.

Q20: In our study, 30% of people stated that all benefits for the city of Vienna are equivalent.

A20: Yes, I do believe that everything is very well coordinated.

Q21: Which benefits of the Danube benefit people most now, which factor that influences the quality of life is the most important thing for people.

A21: I think it's the green space. On the one hand because of the usability, on the other hand because of the climatic effects from the green and blue areas.

Q22: Is it more the sport or the opportunity to relax or is it the culinary offerings that benefit people?

A22: I think it's the complete package because I have everything along the Danube. If only one spectrum were served, it would not be so exciting.

Q23: If you compare the Danube in Vienna with rivers of other cities worldwide, but only in the area of recreational opportunities. Where would Vienna be in the ranking?

A23: I don't have enough overview. Almost all major cities have a river. I cannot assess that.

Q24: And from the gut? Is Vienna with the Danube good, mediocre, or rather bad in this ranking?

A24: There are certainly some who make it better, but many who make it worse. We're probably in the top third, purely estimated. I have too little knowledge of the other cities worldwide to answer well.

Q25: And if you compare not only the area of recreation, but the Danube as a complete package in Vienna with the complete package of rivers in other cities. Is the Danube better or worse in this ranking or in a similar position?

A25: I am pretty sure that we are in the top third with what we do, but without a scientific basis there is no sound answer.

Q26: On a scale from 1 to 10: How does the city of Vienna assess the diversity of the Danube's use? For example, for flood protection, for energy supply, for recreational opportunities, for sports or as an important shipping route etc.

A26: The complete package on a scale of 1 to 10 is definitely 9.

Q27: Could the Danube be used more diversely, i.e. could Vienna reach 10?

A27: New ideas keep coming up. You could certainly tweak the mix of uses to get 10. But only small areas. But otherwise it's actually pretty good as it is at the moment.

Q28: Which screws would that be in the mix of uses?

A28: Create a little more green space than paved areas. A sports harbor could also be somewhere else than in the middle of one of the densely populated shores and maybe a greener, more natural use would then be possible or the wide use of leisure time would be better.

Q29: I now call a screw the perfection with which the green areas were made. Would you have to turn this screw? Have the green areas been cleverly designed or are there still room for improvement in this area?

A29: The design matters are always a very difficult matter. You could usually make a lot of things a lot greener, but whether the green will stay is still a question, because with a certain pressure of use a meadow is no longer green at some point, but a dust field and then a mud field in the rain. Mostly it is very adapted to the current use, the ratio of paved and unpaved green areas. If you could get the previously mentioned sports harbor out of there, there would of course be increased greening potential.

Q30: On a scale from 1 to 10: How does MA18 evaluate the offers along the Danube?

A30: I will stay at 9 here too, because there is a lot going on along the Danube. Something might be better after all, even if I can't determine exactly what that is.

Q31: Do you know which offers people like best and which ones receive special support?

A31: You see that there are as many different options as possible, because people are so different and have very different usage requirements and needs. Accessibility is very important, but not always achievable. Another big topic are the toilets, whereby there are also ongoing improvements and the water tapping points on the island itself are also an issue.

Q32: On a scale from 1 to 10: How does urban planning rate the diversity of offers that the Danube offers to people?

A32: I would rate the offers consistently with a 9. Of course, there are also wishes and ideas here. But then you have to weigh that up with other interests. I still want to leave room for improvement.

Q33: On a scale from 1 to 10: How does MA18 evaluate the quality of the offers?

A33: 9.

Q34: How high is the priority for nature friendliness with all the measures?

A34: For the middle range I would now see nature friendliness at 6. The Danube Island Festival may not be very nature-friendly, but it is not the claim from the central area, which encompasses the area from the Floridsdorfer Bridge to the Reichsbrücke and from the middle section with the "Copa Cagrana". But the nature friendliness at the beginning and at the end, the last kilometers, is at 10. These are near-natural areas where relatively little is done. The rest is somewhere in between. The wooded areas in the central area are designed to be very natural. If you now define nature friendliness in terms of sustainability and natural, natural areas, then it is these peripheral areas (beginning and end of the Danube Island) with small islands in between. There are also these small biotopes.

Q35: And seen over the entire area?

A35: If you take into account that you don't necessarily want to be nature-friendly in the middle, we are at 9.

Q36: Would you like to be more environmentally friendly in the future, also due to the emergence of the so-called climate discussion?

A36: You need areas for the harder, paved uses. The area between Floridsdorfer Bridge and Reichsbrücke is a good choice because it is well developed and there are more paved areas. Also in the sense of reducing the maintenance costs, it is also about being simply more adapted there. There is less and less rainfall and when they come they come very compact.

Q37: Has the city of Vienna managed to integrate the Danube in a way that is both environmentally friendly and economical? If you say nature friendliness is 9, can economy friendliness be 9?

A37: I believe that economic interests are well balanced with nature's interests. Economic integration does not necessarily mean that developments have to be done locally. The public connection to the rest of the city or the economic hotspots give me the advantage that the Danube offers me as a place to relax.

Q38: How important is the economy for urban planning activities in relation to the Danube?

A38: The economy is one of many players. If anything is of economic interest, attempts will be made to look again at compensatory measures. On the Danube Island, there should no longer be any structural consolidation, but something is happening on the banks of the Danube and then, from the point of view of reconciliation of interests, urban planning repeatedly checks that there is an improvement measure towards leisure time.

Q39: What improvements are there? The participants in our survey stated that, above all, the improvement of the infrastructure, in particular in the area of connection with public transport and in the area of the bridges, should take place. They also want a cleaner Danube. The participants saw a lot of pollution on the Danube Island etc. More green spaces and high quality offers were also requested.

A39: Regarding pollution: Use the trash cans that are available to you. Some trash on the Danube Island and on the Danube is beyond our control. The bridges are this double-edged sword. If more bridges cross the Danube, the space is also less accessible. You can see it well between the U6 bridge and the Floridsdorfer bridge. This is a relatively narrow section. The quality that can be created between the two bridges is much lower than can be achieved in larger sections between bridges. With regard to the accessibility of the banks, something is being done throughout. There it is also this: "Green vs. Durability". The green areas do not hold up so well under heavy usage pressure. Paved areas are more likely to be able to withstand more users.

Q40: Which projects are pending for the Danube in the future?

A40: No big things are planned for the Danube itself. The MA45 is constantly working on improving the usability of the Danube Island, e.g. on the expansion of the toilet concept, the drinking water supply and the waste concept.

Q41: Is the stand: "The Danube actually suits us quite well as it is"?

A41: It fits very well as it is now. You also have to look when new interests are being brought up, to look at a balance of interests and to work actively to ensure that all interests are raised.

Q42: How important will the Danube be for Vienna and the city of Vienna in the future? The way of life is changing. One can assume that people will be more stressed in the future. Will the Danube then become more important for the people?

A42: In this sense and also with global warming, the Danube will bring even more encouragement, which will also bring new challenges. To create even more green spaces and shaded areas and to create accessibility on the shore. I think that in the future people will go more towards water and then other interests can be weighed up.

Q43: Will Vienna still be the most liveable city in the world next year?

A43: We think we hope we almost know it. I do believe that we are doing a lot well and we hope that we will be the most liveable city again next year and will be back in the ranking. But a 2nd place wouldn't be that bad either. But I think we keep our place 1 ...

7.3 Vienna in various life quality rankings

7.3.1. Overview:

Vienna is one of the most liveable cities worldwide, which is very relevant for this study. This fact can be shown by the many rankings, where Vienna reached one of the first positions. In the Mercer *Quality of Living Ranking* Vienna already reached the first position the tenth time in one row. In the *Global Liveability Index* by *The Economist* Vienna reached the first position the second time in one row. For these reasons, the work of this study was focused on these two studies.

The following table was copied from the official website of Vienna. For further Information for each ranking, please click on the links.

Ranking	Title	Year	Language
1	Netexplo Smart Cities 2020 Prize - UNESCO	2020	English
2 of 113	Prosperity and Inclusive City Seal and Award (PICSA)	2019	English
1 of 231	Quality of Living Ranking - Mercer	2019	English
1 of 140	The Global Liveability Index - Economist	2019	English
1 of 153	Smart City Index - Roland Berger	2019	English
1 of 101	QS World University Rankings by Subject 2019: Performing Arts	2019	English
1 of 25	Europe's greenest capital cities - Compare the market	2019	English
1 of 69	State Of The World's Cities - UNO: 5.5 MB PDF	2012	English
5 of 25	Monocle Quality of Life Survey	2019	English
4 of 55	City RepTrak-Ranking - Reputation Institute	2018	English
5 of 100	Sustainable Cities Index - Arcadis	2018	English
5 of 150	Global 150 Cities Index	2017	English
5 of 31	Government and Social Media – University of Düsseldorf: 2.4 MB PDF	2014	English
6 of 100	Sustainable Cities Mobility Index - Arcadis	2017	English
6 of 10	Top 10 Start-up Cities	2015	English
19 of 500	Innovation Cities Index - 2thinknow	2018	English
17 of 44	Global Power City Index 2018 - Mori Foundation	2018	English
25 of 135	Global Cities Ranking - A.T. Kearney		

7.3.2 Vienna in for this study relevant rankings:

Quality of Living Ranking by Mercer:

The following table shows the position of Vienna in the Quality of Living Ranking 2019. Vienna reached this position the tenth time in one row.

Due to the fact that Mercer's Ranking primarily is conducted to help governments and major companies place employees on international assignments, you need to pay to get further information on how these rankings were made.

For these reasons the Mercer Ranking was only used to show how liveable Vienna was.

2019 rank	City	Country
1	Vienna	Austria
2	Zürich	 Switzerland
3	Munich	 Germany
3	Auckland	 New Zealand
3	Vancouver	 Canada
6	Düsseldorf	 Germany
7	Frankfurt	 Germany
8	Copenhagen	 Denmark
9	Geneva	 Switzerland
10	Basel	 Switzerland

The Global Liveability Ranking by The Economist

For the reasons mentioned in 3.2.2., we used the *Global Liveability Ranking* to determine the reasons for Vienna being the most liveable city worldwide. For the results please see 4.4.

The following table gives the Top 10 cities in the Economist ranking 2019:

The ten most liveable cities

Country	City	Rank	Overall Rating (100=ideal)	Stability	Healthcare	Culture & Environment	Education	Infrastructure
Austria	Vienna	1	99.1	100	100	96.3	100	100
Australia	Melbourne	2	98.4	95	100	98.6	100	100
Australia	Sydney	3	98.1	95	100	97.2	100	100
Japan	Osaka	4	97.7	100	100	93.5	100	96.4
Canada	Calgary	5	97.5	100	100	90	100	100
Canada	Vancouver	6	97.3	95	100	100	100	92.9
Canada	Toronto	7	97.2	100	100	97.2	100	89.3
Japan	Tokyo	7	97.2	100	100	94.4	100	92.9
Denmark	Copenhagen	9	96.8	95	95.8	95.4	100	100
Australia	Adelaide	10	96.6	95	100	94.2	100	96.4

The table besides gives information on the methods used to determine the most liveable city in the Ranking. The Danube takes part in the Category Culture & Environment (Humidity/temperature rating due to fresh air supply coming into the city by the Danube, which lower temperatures, sporting availability due to offers along the Danube, cultural availability due to sightseeing destinations and consumer goods & services due to restaurants along the Danube) and in the Category Infrastructure (Availability of good housing due to properties build along the Danube and Quality of energy provision due to the hydroelectric power station Freudenau).

Category 1: Stability (weight: 25% of total)	
Indicator	Source
Prevalence of petty crime	EIU rating
Prevalence of violent crime	EIU rating
Threat of terror	EIU rating
Threat of military conflict	EIU rating
Threat of civil unrest/conflict	EIU rating
Category 2: Healthcare (weight: 20% of total)	
Indicator	Source
Availability of private healthcare	EIU rating
Quality of private healthcare	EIU rating
Availability of public healthcare	EIU rating
Quality of public healthcare	EIU rating
Availability of over-the-counter drugs	EIU rating
General healthcare indicators	Adapted from World Bank
Category 3: Culture & Environment (weight: 25% of total)	
Indicator	Source
Humidity/temperature rating	Adapted from average weather conditions
Discomfort of climate to travellers	EIU rating
Level of corruption	Adapted from Transparency International
Social or religious restrictions	EIU rating
Level of censorship	EIU rating
Sporting availability	EIU field rating of 3 sport indicators
Cultural availability	EIU field rating of 4 cultural indicators
Food & drink	EIU field rating of 4 cultural indicators
Consumer goods & services	EIU rating of product availability
Category 4: Education (weight: 10% of total)	
Indicator	Source
Availability of private education	EIU rating
Quality of private education	EIU rating
Public education indicators	Adapted from World Bank
Category 5: Infrastructure (weight: 20% of total)	
Indicator	Source
Quality of road network	EIU rating
Quality of public transport	EIU rating
Quality of international links	EIU rating
Availability of good quality housing	EIU rating
Quality of energy provision	EIU rating
Quality of water provision	EIU rating
Quality of telecommunications	EIU rating

7.4. Structure of this work

The following graphic illustrates the pattern used to analyze the survey and the interview and to conclude. Due to this pattern, we were able to specify our work and had a clear structure. Because of the complexity of this graphic and the pattern and the may resulting confusion, we decided to put it into the appendix.

In order to work scientifically and cover a research question from different perspectives, it is essential to get a good overview. For the work we considered some “subquestions”, we need to answer to answer our main research question. This “subquestions” (called categories below) specified or explained one perspective of our research question and were linked with each other, which is indicated with arrows in the graphic. This “subquestions” made it able to categorize the answers to the interview and the survey and made them linkable to the research question. This made our work deterministic. For further information, please study the graph shown below.

