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EUROPEAN UNION

Danube Transnational Programme

URBforDAN

URBforDAN Strategic Planning

Strategic part of Integrated multi-use Management Plans for
Danube Island (Vienna)



**Stadt
Wien**

Wiener
Gewässer

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I. INTRODUCTION

About the URBforDAN Project

Management and Utilization of Urban Forests as Natural Heritage in Danube Cities (with acronym URBforDAN) is an EU co-financed project, which was designed to deliver a change in urban forest management and utilization of ecosystem services. URBforDAN project is being implemented in 7 Danube Cities – Ljubljana (SLO), Vienna (AT), Budapest (HUN), Zagreb (CRO), Cluj-Napoca (ROM), Belgrade (SRB) and Ivano-Frankivsk (UA). Its' implementation is closely observed by 3 associated partner cities – Prague (CZE), Sarajevo (BIH) and Podgorica (MNE), as well as by Food and Agriculture Organization of the United Nations.

Urban and Peri-urban Forests (UPF) in Danube Cities play extremely important role as “green city lungs” - preserving rich biodiversity of Europe and its vivid landscape. They also deliver many economically/socially important ecosystem services – UPF are key areas for experiencing natural/cultural heritage within cities, important tourist attractions, areas for recreation and high quality of living.

All URBforDAN Cities face similar challenges – all manage substantial NH areas (mostly UPF) within their city limits. Due to their characteristics they attract many users (citizens, tourists...), but also have many stakeholders (managers, owners, interest groups...) trying to manage those activities. Today, this is usually done without proper coordination of all stated key actors. UPF also lack appropriate infrastructure and equipment to cope with ever increasing number of users. Thus, UPF are under increasing pressure from diverse set of activities, arising conflicts and unsustainable use of resources – all leading to poor state of NH. Management of UPF in some cities is further challenged by the extreme fragmentation of the ownership (which is often mostly private).

This is why URBforDAN takes on the challenge of mobilization of key actors in URBforDAN Cities to ensure their active participation in integrated planning/management. Protection regimes, mapping/valuation of ecosystem services and development ideas will be combined through a participatory process to deliver Integrated multi-use Management Plans for UPF on strategic and operational level. UPF Danube Network will be established to strengthen the cooperation between key actors, ensure timely knowledge/best-practice sharing, dissemination/transferability of project outputs and enable further capitalization. UPF managers, owners and users will be equipped with management tools supporting multi-purpose use of UPF and exploiting new opportunities for sustainable development. Participatory Planning & UPF Management Guidelines will be developed, based on lessons learned and best practices used.

1. Strategic part of the Integrated Multi-use Management Plan (IMMP)

1.1 The objective of strategic plan

Overall, the aim of the **Strategic part of the Integrated Multi-Use Management Plan (IMMP)** is to **identify demands towards urban and peri-urban forests (UPF), potential conflicts between different forest uses**, to define strategic **long-term management objectives** in UPF, and to define **priorities** amongst management objectives and ecosystem services (ES). The strategic part also defines management guidelines that represent the basis for the definition of operational goals and measures.

In the **City of Vienna**, the Strategic Part of the IMMP covers the **management of the Danube Island**. The Danube Island is located in the Danube River and was originally constructed as flood protection dam in the late 80ies (more information is described in chapter 2).

Over the last 40 years it has developed to a **large recreational area** for the inhabitants of Vienna, which is used by the population for different activities, like cycling, bathing, walking, jogging, for festivals, etc. Every year, approximately 6 Mio. People are visiting the Danube island. But the Danube Island has not only the function as **flood protection dam** and recreation area, it has also developed to an **important ecosystem and therefor to a habitat for different species** (flora and fauna). While the northern and southern part of the Danube island are densely covered with forests, the middle part of the island is the part which is mostly used for recreational and leisure activities and therefore the forests in this part are only low-densely covered with forests. The whole area of the Danube Island is around 370 ha, 145 ha are covered with forests.

The **City of Vienna, Municipal Department for Water Management – Dep. 45**, is partner in the project URBforDAN and is therefore **responsible for elaboration of the Strategic Part of the IMMP**.

The **Strategic Area** covers the whole **Danube Island**. Within this area, **three focus areas** have been identified during the project application phase, which are seen as the **main problematic areas** and therefore where actions have to be implemented:

- 1) The **Zinkabachl** is an ecological landscape in the north of the Danube Island and consists of a small river connected to the “Neue Donau” with forests on both riversides. This area is an important ecological landscape and is located within a landscape protection area (“Landschaftsschutzgebiet”) and within a water supply protection zone. Moreover, it is a known habitat for beavers (protected species acc. to Viennese Nature Conservation Decree). Main problem is that homeless people use this place as their home – the result is pollution of a high valuable ecosystems as well as disturbance of other user groups.
- 2) The **Toter Grund** is a natural monument (legal nature protection area) in the southern part of the Danube Island. It represents an old tributary of the Danube river and is therefore highly valuable for different species (protected and non-protected). Main problem is that this area is known as a hotspot for sexual activities (homosexual but also heterosexual people meet there for sexual interaction) due to its densely wooded structure (many places to hide). The result is destruction of the natural monument and indecent exposure.
- 3) The **Bay Reichsbrücke** is a valuable recreation area in the middle of the Danube Island. It is a structural river bay, which is connected to the Danube on one side. Main functions are recreational area for visitors and ecological compensation area for the hydro power plant “Freudenau”. Due to its location near the metro line this place is often used for drug dealers. Results are pollution (with high infective materials like syringes) and threats to other user groups.

Aim of the Strategic Plan is to **identify main conflicts** of the Strategic area which is in this case the Danube Island and to define long-term objectives for the further development of the Island. **The conflicts and problems have been identified and further elaborated together with different stakeholders** (via workshops and a user questionnaire – refer to chapter 1.2). The **following priority conflicts** have been identified according to stakeholder consultations:

1) Conflicts between different user groups:

- There is a pathway system on the island which is used for inline-skating, jogging, walking, cycling, walking with the dog etc., there is **no separation of the user streams**. Especially in narrow passages, this leads to conflicts (different velocities of user groups, dogs without leash, etc.)
- **Some user groups are very “possessive”**: there are people living on the island (e.g. homeless people) who claim certain spaces as their property. Further, along the island there are certain nudist areas, where the people are also very possessive and treat other people like “people from outer space”. This leads to conflicts e.g. when departments want to implement protection cuts.
- The focus areas are often used from social fringe groups which leads to problems (Zinkabachl – homeless people – pollution, disturbance of other user groups; Bay Reichsbrücke – drug addicts – threats to other user groups, pollution with high infective materials; Toter Grund – sex in public places – destruction of the natural monument, indecent exposure).

2) Influences of forests due to user groups:

- Vandalism, pollution of areas (waste)
- Infective materials (syringes) from drug addicts

3) Maintenance and care of forests sometimes difficult:

- Possessive user groups do not understand (necessary) works of departments

4) Increase of use:

- Too much grill zones
- Increasing events (Donauinselfest, Afrika Tage, Beachvolleyball-WM, etc.)
- Not enough toilets and drinking fountains
- Stress to flora and fauna

5) No / not enough information

- About importance of nature, biodiversity, climate change, forests

During preparation of the Strategic Part of the IMMP, the whole area of the Danube Island has been mapped (forested and non-forested areas). The mapped areas have been allocated to several functions of ecosystem services (please refer to chapter 2.2). Summarizing, there are **certain areas of the Danube Island with special functions / areas which are providing important ecosystem services**:

- In the northern part of the Island, there is a **legal water protection zone** acc. to water act.
- The northern and southern part of the island is **legally protected acc. to nature conservation** act.
- The middle part of the island is mainly used for **recreation**.
- The total **forested area** of the Danube island has (mainly) the function of welfare, more specific for **climate regulation**, according to the existing forest development plan. Minor parts are allocated to the recreation function.

Details on legal documents and relevant management guidelines are included in chapter 1.2 and 1.3.

The following **priority stakeholder groups** have been identified (for details, please refer to chapter 2.3):

- Users of the Danube Island: e.g. Cyclists, Joggers, Pet Walkers, Skaters, etc,
- Representatives of social fringe groups
- Forest Owner: public ownership – owner: DHK; viadonau is the operational unit of the DHK
- Management authorities of the Danube Island and its forests: City of Vienna, represented by different departments

The **main objective** is to **combine different interests of users while preserving nature**. The **long-term (strategic) objectives** are therefore defined as the following:

- 1) Protection and preservation of the ecosystem Danube island (habitats, species and landscapes)
- 2) Protection and preservation of the drinking water supply
- 3) Preservation of the function as large recreation area for the City of Vienna
- 4) Awareness rising and information of the importance of nature, biodiversity and forests

Details on strategic objectives are given within chapter 3.

1.2 The planning process and participation

1) Participatory process

The planning process was led by the City of Vienna, Municipal Department for Water Management – Dep. 45 (partner of URBforDAN project). The participation strategy was to organize workshops, where other departments of the City of Vienna and stakeholders were invited to explain existing problems and to give inputs on their opinion about the strategic area.

At the beginning of URBforDAN project, **stakeholders were identified** and reach from user groups for leisure and recreation activities to social organizations representing social fringe groups to relevant authorities dealing with maintenance and care of the Danube Island. Please find in the table below, all identified stakeholders.

Table 1: Identified Stakeholders, responsibilities and their involvement

Stakeholder name	Role / Responsibility	Involvement	Joined WS
City of Vienna	Project Partner URBforDAN / WP2 leader, land owner (partially)		
City of Vienna - Municipal Department for Water Management – Dep. 45	Responsibility of Project Implementation in Vienna Overall responsibility for the Danube Island management and for riparian forests and water bodies on the island		1,2
City of Vienna - Municipal Department for Forestry and Agriculture – Dep. 49	Care of forest areas on the Danube Island	WS, direct contact, authority Communication tools	1,2
City of Vienna - Municipal Department for Gardens and Parks – Dep. 42	Care of parks on the Danube Island	WS, direct contact, authority Communication tools	1,2
City of Vienna - Municipal Department for Environment – Dep. 22	Responsible for nature protection in Vienna	WS, direct contact, authority Communication tools	1,2

Forst inspection unit of Vienna (City of Vienna - Municipal Department for Vienna Water – Dep. 58)	Preparation of the forest development plan in Vienna	Direct contact, Communication tools	--
City of Vienna - Municipal Department for Water – Dep. 31	Responsible for water supply in Vienna	Direct contact, Communication tools	--
Donauhochwasserschutz - Konkurrenz DHK (Danube Flood Protection Agency)	Land (therefore Forest) Owner of the Danube Island; Responsible for Flood Protection measures on the Danube in Lower Austria and Vienna (DHK members are the City of Vienna itself, the republic of Austria and the Province of Lower Austria)	Via operational management unit via donau	--
Via donau	Operative management for DHK	WS, direct contact, authority Communication tools	1,2
21. District Floridsdorf & 22. District Donaustadt	District governments with elected chairperson and council, responsible for specified local issues	To be consulted on activities Communication tools	--
Public (Visitors, Users): Joggers, Hikers, Cyclists, Inline-Skaters, With the dog walkers, Quality time spenders (friends, family), Forest product pickers, Bathers, Photo hunters, Workers	Spending time on the Danube Island, influenced by the project Target group for actions	WS, Communication tools	1,2
Educational institutions: Schools, Universities	Target group for actions	Communication tools	--
Social organization: Caritas Gruft	representing social fringe group “Homeless people” Target group for actions	WS, direct contact, Communication tools	1,2
Social organization: WAST	representing social fringe group “Homosexuals” Target group for actions	WS, direct contact, Communication tools	1
Social organization: Check-it	representing social fringe group “Drug addicts” Target group for actions	WS, direct contact, Communication tools	1,2

In the project, **2 stakeholder questionnaires** were prepared in order to gain data and inputs on potential conflicts, problems, solutions etc.:

- **Questionnaire for forest owners:** filled in by the resp. authority for forest management of the Danube Island (Dep. 49)
- **Questionnaire for forest users:** filled in within the 1st workshop (details below) from the stakeholders and further it was developed to an online survey, which accessible online for participation on CoV’s homepage and also shared on Facebook (URBforDAN Facebook page and Facebook page “Danube Island” with more than 15.000 followers) for 2-3 weeks. Around 100 people attended the online questionnaire.

The stakeholders were **invited to 2 workshops**. In the **1st workshop** (Nov 2018) the project was presented and **conflicts, problems and solutions were discussed** together.

A detailed **stakeholder analysis** was elaborated in January 2019 where all gathered information has been compiled and analysed.

In the **2nd workshop** (Feb 2019) the results of the analysis were presented as well as foreseen actions in the focus areas.

The stakeholders will be kept updated **via the website and upon request**. A **presentation** with detailed actions foreseen will be held, inviting again all stakeholders.

2) Used guidelines and databases

For elaboration of the strategic plan and the Ecosystem Services (S) Mapping (refer to chapter 2.2) the following guidelines were considered:

- Forest Development Plan (“Waldentwicklungsplan” - WEP):

In 1991 Austria elaborated a nationwide forest development plan (“Waldentwicklungsplan”, WEP) according to the Austrian Forest Act 1975. It demonstrated the conditions of the Austrian forests and its development potential. The plan (map) has been digitalized and is available here: www.waldentwicklungsplan.at/map. The forested areas demonstrated in the ES maps are extracted from the WEP (extraction date: Sep. 18).

- Danube Island “rules for behaviour”:

The “rules of behaviour” for the Danube island are defined via decree¹. It regulates i.a. restrictions on:

- Green areas and nature protected areas, use of motorized vehicles
- Bathing, driving by boats, water sports on/at the Danube and New Danube
- Walking with the dog
- Camping, barbeque, nudist zones
- Events

- Land use plan “Flächenwidmungsplan”)

The land use plan (“Flächenwidmungsplan”) assigns specific dedications to each property, which determines how the property can be used (for construction, grassland / open land, traffic area, other specifications). The land use plan of Vienna defines parts of the Danube Island as areas for recreation, parts as protected zones and parts as area for events.

- City Development Plan 2025 (“STEP 2025”)

The City Development Plan 2025 (STEP 2025) of Vienna has a predominantly strategic character and sets the direction of urban development until 2025. The plan does not foresee any developments regarding the Danube Island depart from its preservation (important ecological corridor, recreation for tourism, etc.).

- **Database for GIS data preparation:** MA 41 Stadtvermessung, BEV - Bundesamt f. Eich- u. Vermessungswesen, Stadt Wien - Wiener Gewässer

- **Legal documents** (refer to chapter 1.3).

¹ https://www.ris.bka.gv.at/Dokumente/Gemeinderecht/GEMRE_WI_90101_I290_000/GEMRE_WI_90101_I290_000.html

1.3 Legal basis

1) Austrian Water Act

One part of the Austrian Water Act 1959² regulates the protection of drinking water supply by defining “water protection zones”. The zone and the usages in these areas are defined (and/or restricted) per decree. For special usages, permits have to be obtained from the relevant authorities. On the Danube Island, there is a water protection zone in the northern part of the island (“Schutzgebiet "Brunnenfeld Donauinsel-Nord" - Schutzzone I + II).

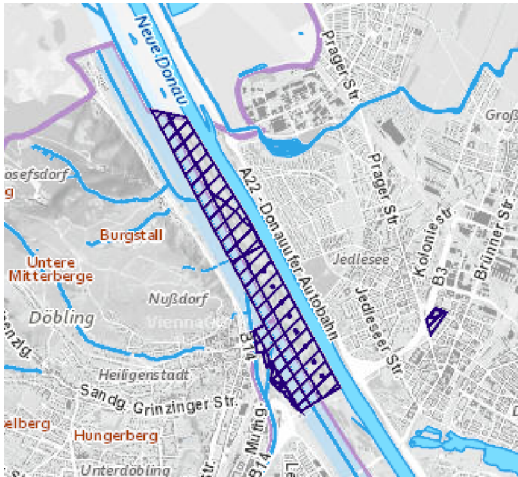


Figure 1: Water protection zone, Danube island (source: <https://www.wien.gv.at/umweltgut/public/>)

2) Viennese Nature Conservation Act

The aim of the Viennese Nature Conservation Act³ is the protection and care of nature in all its manifestations (comprehensive nature conservation). Nature is defined with: endangered species, rare biotopes, protected areas or protected objects, as well as places that may be the habitat of rare species.

The long-term goal is the preservation or restoration of an ecological balance of nature in all its manifestations. Every legally protected good has its own protection goals.

Parts of the Danube Island are legally protected by nature conservation decree of Vienna⁴. The Zinkabachl is located within a landscape conservation area (LSG Floridsdorf, Teil F, Donauinsel Nord⁵). The Toter Grund is a natural monument. Moreover, legally protected species are located at the Zinkabachl (beaver).

² <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10010290>

³ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrW&Gesetzesnummer=20000454>

⁴ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrW&Gesetzesnummer=20000419>

⁵ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=LrW&Gesetzesnummer=20000483>

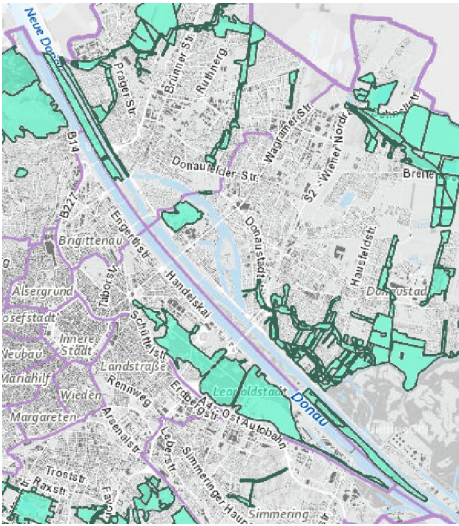


Figure 2: Protected areas - landscape conservation areas in Vienna (source: <https://www.wien.gv.at/umweltgut/public/>)

4) Austrian Forest Act

According to the Austrian Forest Act⁶ everyone can use forests for recreational purposes. Special activities are only allowed with a permit from the forest owner.

The act also regulates the spatial development of the forest areas (to develop a “WEP”) which is obligatory for whole Austria.

5) Viennese Act on Protection of Trees

In Vienna, a special act (tree protection act⁷) regulates that clearing is not allowed at all for trees that are bigger than 40 cm trunk diameter (special permits have to be obtained for clearing).

1.4 Terminology

Ecosystem Services - The benefits that people obtain from ecosystems (MA, 2005). The direct and indirect contributions of ecosystems to human well-being (TEEB, 2010). The concept 'ecosystem goods and services' is synonymous with ecosystem services. The service flow in our conceptual framework refers to the used service. The direct and indirect contributions of ecosystems to human well-being.

Habitat – The physical location or type of environment in which an organism or biological population lives or occurs. Terrestrial or aquatic areas distinguished by geographical, abiotic and biotic feature, whether entirely natural or semi-natural. [Note the Council of Europe definition is more specific: the habitat of a species, or population of a species, is the sum of the abiotic and biotic factors of the environment, whether natural or modified, which are essential to the life and reproduction of the species within its natural geographic range.]

Heritage [Cultural and Natural] – Our legacy from the past, what we live with today, and what we pass on to future generations. Physical objects produced and used by past generations, ranging from small-scale domestic utensils to largescale buildings, monuments, places and landscapes, may become valued as cultural heritage by their descendants. Equally, symbolic products of human creativity and imagination such as music, visual arts, poetry and prose, knowledge and know-how contribute to a society or group's understanding of its cultural heritage.

⁶ <https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10010371>

⁷ <https://www.wien.gv.at/recht/landesrecht-wien/rechtvorschriften/html/I5400000.htm>

Participatory Approach – Family of approaches and methods to enable (rural) people to share, enhance, and analyze their knowledge of life and conditions, to plan and to act, to monitor and evaluate.

Urban and peri-urban forests – Urban forests can be defined as networks or systems comprising all woodlands, groups of trees, and individual trees located in urban and peri-urban areas; they include, therefore, forests, street trees, trees in parks and gardens, and trees in derelict corners. Urban forests are the backbone of the green infrastructure, bridging rural and urban areas and ameliorating a city's environmental footprint. Urban and peri-urban forestry (UPF) can be defined as an integrated, interdisciplinary, participatory and strategic approach to planning and managing tree resources in urban and peri-urban areas for their economic, environmental and sociocultural benefits (FAO⁸).

2. ANALYSIS OF THE STATE OF THE ART

2.1 Basic data on the strategic area

The Strategic Area in Vienna is the Danube Island. It is an **artificial island created for the flood protection** of Vienna (length: 21km, average width 210 m). The island lies between the Danube and the flood protection channel “New Danube”, effectively dividing Vienna into two halves.

The Danube Island is one of the **most important recreation zones in Vienna**. In the northern and southern parts, the island has near-natural elements; the central part is used intensively for anthropogenic purposes. The surface of the whole Danube island is 370 ha, 145 ha of which is covered with forests (according to the WEP, data extraction Sep. 2018).

The location of the Strategic Area is demonstrated in the map below (Figure 3).



Figure 3: Location of the Danube Island within the City of Vienna

⁸ <http://www.fao.org/forestry/urbanforestry/87025/en/>

Vienna's Danube Island serves primarily for flood protection and separates the Danube and the New Danube. In the meanwhile, the Danube Island has become a recreational, event and natural paradise of the Viennese population. According to the generalized land use plan of Vienna the **following land use distribution** can be found at the Danube island and the New Danube.

- Recreational areas (parks, sports grounds / playgrounds, ground areas, storage meadow): approx. 12%
- Protected Areas (Protected Landscape Area / Natural Monuments): approx. 50%
- Traffic bands (Danube): approx. 26%
- Special areas (relief channel): approx. 12%

Ownership structure:

Before the relief channel (Neue Donau) was excavated and the Danube Island was created from the excavated material, the area belonged to **2/3 to the City of Vienna, to 1/3 to the Republic of Austria**. This ownership has not changed. However, there are two small parts that belong to 100% to the City of Vienna. Only the northern part of the island (around 25 ha) are owned by the Province of Lower Austria.

The **DHK ("Donauhochwasserschutz-Konkurrenz")** is an organization founded based on a federal law and is responsible for the conservation of the flood protection in Vienna and Lower Austria (the Danube Island is a flood protection dam). The 3 curia partners are:

- The Republic of Austria
- The Province of Lower Austria
- The City of Vienna

The ownership structure of the Danube Island **represents the structural division of the DHK** for this flood protection dam. Simplified expressed, the island is owned by the DHK. The operative unit of the DHK is the via donau (subsidiary of the Austrian Ministry for Transport, Innovation and Technology tasked with the preservation and development of the Danube waterway).

As the **ownership structure of the island is represented by public bodies**, it can be categorized as public ownership.

A more detailed map of the strategic area also showing the forested areas is demonstrated below (Figure 4).

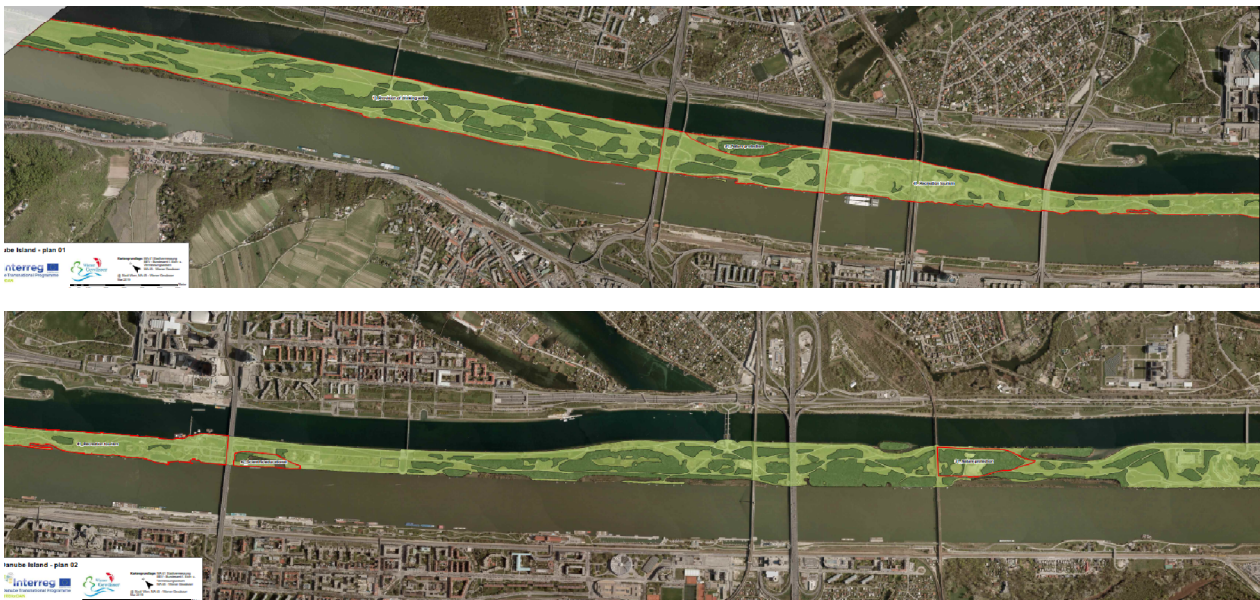




Figure 4: Strategic part – Danube island incl. forested and non-forested area (source: WEP)

Maintenance and care

Responsible for **maintenance and care** of the Danube Island are mainly three municipal departments of the city of Vienna

- Municipal Department for Water Management – Dep. 45 (responsible for water bodies, biotopes, river banks, embankments)
- Municipal Department for Forestry and Agriculture – Dep. 49 (responsible for forested areas, peripheral areas)
- Municipal Department for Gardens and Parks – Dep. 42 (responsible for parks, meadows, some biotopes)

Moreover, some parts are in additional care of further departments:

- Municipal Department for Environment – Dep. 22 (nature protection areas)
- Municipal Department for Water – Dep. 31 (water protection zone)

Basic data on forests (Danube Island)

According to the Dep. 49

- the growing stock is about 135 m³/ha
- the annual increment is about 4,4, m³/year per ha
- the annual cut is about 100 steres (1 stere ~ 0,7m³) per year

Parts of the produced woods is used for the barbeque areas on the Danube Island. The other part is sold.

The type of forests growing on the Danube Island are deciduous forests (classes: *Fraxinus*, *Quercus*, *Acer*, *Tilia*, *Juglans*, *Prunus*, *Carpinus*)

More data regarding forest management (e.g. data on development phases/age classes, growing stock, stand increment) can be provided by the Municipal Dep. 49 Forestry and Agriculture⁹ or the land forest inspection unit¹⁰.

2.2 Ecosystem services (ES) in UPF

According to the **WEP**, the **forests on the Danube Island** are mainly (98,52%) characterized as forest with **welfare function (for climate regulation)**. A minor part (1,48%) has the function of recreation.

⁹ <https://www.wien.gv.at/kontakte/ma49/index.htm>

¹⁰ <https://www.wien.gv.at/umwelt/wasserrecht/landesforstinspektion/>

More detailed functions have been elaborated and categorized **within URBforDAN project** and are provided by ecosystems and its services (Ecosystem services – ES). URBforDAN project defines **4 different main categories of ES** – **provisional** ES (e.g. provision of drinking water), **regulating** ES (e.g. local climate mitigation), **supporting** ES (e.g. nature protection) and **cultural** ES (e.g. recreation/tourism, educational/scientific, cultural heritage). Further, a **unified ranking** for these ES has been elaborated (1 – very important, 2 – important, 3 – medium important). Ranking was only done for ES that are important.

The **guidelines for ES mapping** (prepared by the project) include a detailed description of the ES and the ranking system.

Therefore, the whole **Danube Island** has been mapped **according to the guidelines for ES mapping** with the following **results** (entire forest area: 145 ha).

Table 2: Summary of the most important ES (ES mapped in ha on the Danube island with 1st and 2nd rank)

Ecosystem service (ES) – area (ha) and % of entire forest area – only 1 st rank and 2 nd rank	Individual objective/ES	Area (ha) and % of entire forest area
Provisioning ES	11_Timber production	
	12_Non-timber products	
	13_Provision of drinking water	30,2 ha; 21,0 %
Regulating ES	21_Local climate mitigation	90,9 ha; 63,3%
	22_Local air quality	
	23_Protection against noise pollution	
	24_Regulation of floods	
	25_Protection against erosion	
Supporting ES	26_Waste-water treatment	
	31_Nature protection / habitats for species	7,9 ha; 5,5%
Cultural ES	41_Recreation and tourism	16,0 ha; 11,2 %
	42_Scientific / educational	0,3 ha; 0,2 %
	43_Cultural heritage	

The **maps of ES** are demonstrated in **Appendix 1**.

The mapping and ranking of ES in Vienna have been done with a **group of experts** (ecologists, landscape designers, Danube Island specialists, GIS experts).

Provisioning ES

Besides from the annual cut due to security reasons there is no timber production on the Danube Island. Further, timber production is not the main function and therefore it is not seen as important ES (no mapping).

There are also no non-timber products extracted from the forests on the island.

In the northern part of the Danube island there is a legally protected water supply area (refer to chapter 1.3), covered with forests. The main function is therefore **provision of drinking water supply** (the water is produced from groundwater below the Danube Island; the main source of drinking water for Vienna is located outside of Vienna; the groundwater wells on the Danube Island wells are kind of a backup supply for the city). The total forested area in this water supply zone is approx. 30 ha. It is ranked with 1.

Regulating ES

As dedicated in the WEP, the main area of forested areas on the Danube Island are for climate regulation (ranked as very important). Therefore, areas with no special other ES function was dedicated to “local climate mitigation”. It was mapped with ranking 2.

Even if the Danube Island is a flood protection dam, the forests are not regulating the floods (this is done by the dam itself and other flood protection facilities).

The other functions of regulating ES are not applicable.

Supporting ES

The northern and southern part of the Danube Island are protected landscape areas (refer to chapter 1.3). ES areas for nature protection were mapped at the Zinkabachl, an important habitat for beavers (legally protected acc. to Viennese Nature Conservation Decree) and at the “Ostbahnbrücke”, an important habitat for dicesnakes (also legally protected). These areas form retreats and development areas for fauna and flora. These two areas were ranked with 1.

Further, as the Toter Grund is a natural monument, it was mapped with ranking 2.

Cultural ES

The Danube Island is a free “relaxation room” in the middle of the city. Many people use this large area for outdoor sports and recreation (refer to chapter 1.1). The good public access (tram, metro) is one of the reasons for the high use. Besides from vehicles for maintenance and care and some exceptions, no motorized vehicles are allowed on the Island.

The middle part of the island is therefore mapped with recreation/tourism (ranking 1). Further, the Toter Grund is also used for recreation (ranking 3).

The Bay Reichbrücke is used and should be used as educational/scientific area for schools and universities as it is located near to a school and also near to the public transport (metro U1). An educational path is foreseen. It was ranked with 1.

No cultural heritage areas can be found on the island.

2.3 Target groups

The City of Vienna identified several stakeholder groups of users of the Danube Island (refer also to chapter 1.1), however, only the following ones were selected as Key Stakeholders based on the conducted survey:

- 1) Management authorities of the Danube Island:** City of Vienna, Dep. 45 – Water Management, Dep. 22 – Nature Protection, Dep. 42 – Gardens and Parks, Dep. 49 – Forestry and Agriculture, viadonau (Operative Management of DHK – official owner)
- 2) Visitors / tourists / users for leisure and recreation activities:** Joggers, Hikers, Cyclists, Inline-Skaters, With the dog walkers, Quality time spenders (friends, family), Forest product pickers, Bathers, Photo hunters, Workers
- 3) Educational institutions:** Schools, Universities
- 4) Special user groups / organizations:** Caritas Gruft (Social Organization for Homeless people), WAST (Social Organization for Homosexuals), Check-it (Social Organization for Drug Addicts)

3. THE STRATEGIC PRIORITIES

The **main objective** is to **combine different interests of users while preserving nature**. The **long-term (strategic) objectives** are therefore defined as the following:

1) Protection and preservation of the ecosystem Danube island (habitats, species and landscapes)

The Danube Island is a valuable ecosystem and a large habitat for different kind of species (flora, fauna). The first long-term objective is therefore the preservation and protection of this ecosystem. This means on the one hand, additional and / or adapted maintenance and care of the island (e.g. adapted to climate change) and on the other hand to **protect habitats and species from destruction** (e.g. pollution, too much visitors). Through preservation of the whole ecosystem and its services also a good micro-climate and therefore the climate regulation function can be assured.

2) Protection and preservation of the drinking water supply

The second goal is to protect and preserve the backup drinking water supply from the City of Vienna in the northern part of the island from negative impacts (pollution, too much visitors, etc.).

3) Preservation of the function as large recreation area for the City of Vienna

Although an increase of the visitors is not desired, the overall function as area for recreation and leisure activities should be preserved. Therefore, different uses should be combined the best possible way. Communication and information are part of the key strategies to reach this goal but also visitor guidance actions (information boards, restrictions to special zones, etc.).

4) Awareness rising and information of the importance of nature, biodiversity and forests

One goal (which is also supporting the other goals) is to increase the awareness the importance of nature, biodiversity and forests of all stakeholder groups. This will be achieved through proper and timely communication and information between different user / stakeholder groups.

4. THE SPATIAL DEVELOPMENT CONCEPT OF UPF

The **Strategic Area** covers the whole **Danube Island**. The City of Vienna, Municipal Department for Water Management – Dep. 45 is responsible for implementation of the Strategic Part (SP) of IMMP within the URBforDAN project. Besides two other departments (49 – Forestry and Agriculture and 42 – Gardens and Parks) Dep. 45 is responsible for conservation and maintenance of the Danube Island (strategic area). The Dep. 45 is not responsible for the management of forests and therefore the SP **doesn't address "classic" forest management issues** (this has been clearly stated in the project application phase).

The actions to be implemented are restricted to three relatively small focus areas (approx. 23 ha) and not an entire forest area, where the **main objective is to combine different interests of users while preserving nature**.

Main problems are: conflicts between different user groups, pollution, absent information and awareness of the importance of nature conservation

Main actions are therefore: regulating user groups, information and awareness rising

Within the Strategic area, **three focus areas** have been identified during the project application phase, which are seen as the **main problematic areas** and therefore where actions have to be implemented. The location of these three focus areas is demonstrated below.

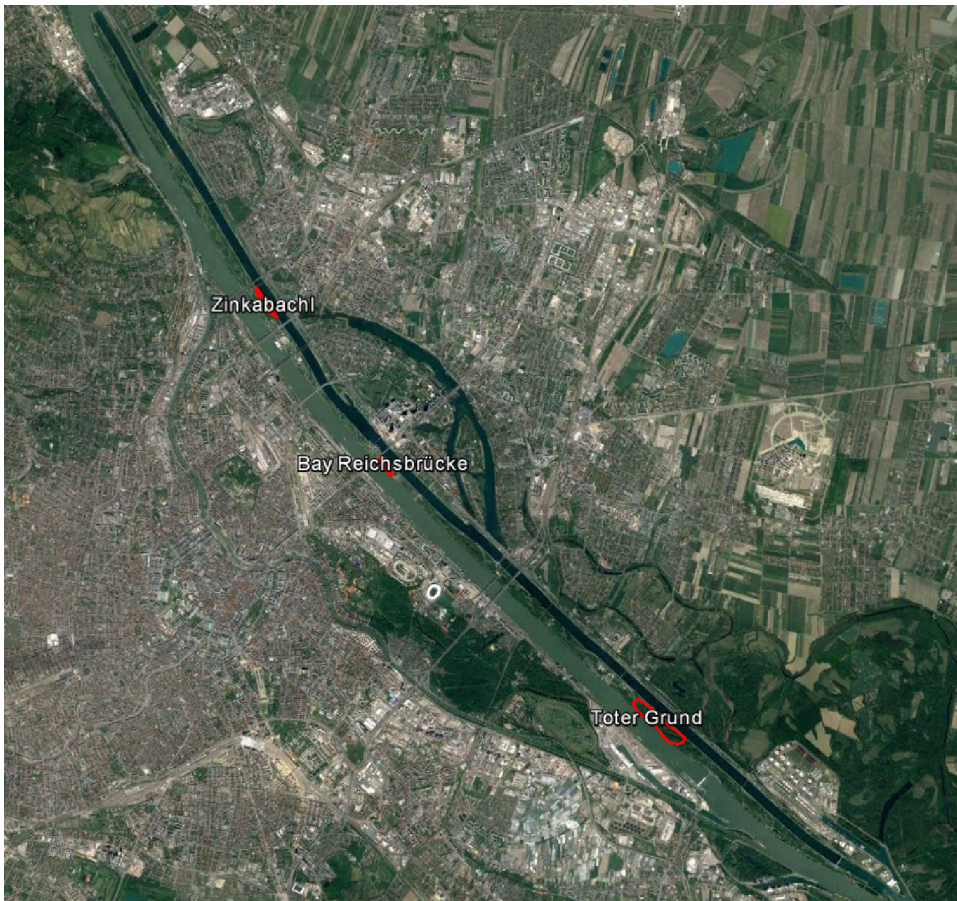


Figure 5: Location of the three focus areas

1) Zinkabachl

Description and problems:

The Zinkabachl is an ecological landscape in the north of the Danube Island and consists of a small river connected to the “Neue Donau” with forests on both riversides. This area is an important ecological landscape and is located within a landscape protection area (“Landschaftsschutzgebiet”) and within a water supply protection zone. Moreover, it is a known habitat for beavers (protected species acc. to Viennese Nature Conservation Decree).

Main problem is that **homeless people** use this place as their home – the result is pollution of a high valuable ecosystems as well as disturbance of other user groups.

Main ES function: Nature protection / habitats for species (1)

Therefore, actions will be set to protect habitats and species. Details are part of the operational part of the IMMP.

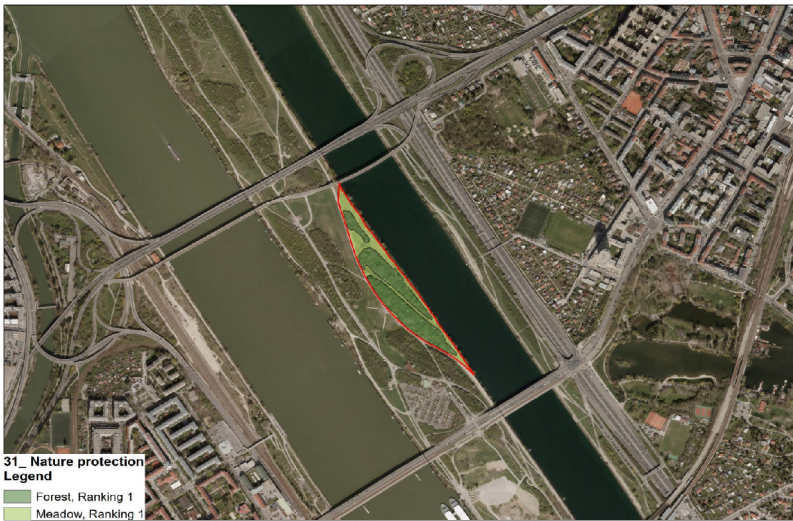


Figure 6: Focus area Zinkabachl

2) Toter Grund

Description and problems:

The **Toter Grund** is a natural monument (legal nature protection area) in the southern part of the Danube Island. It represents an old tributary of the Danube river and is therefore highly valuable for different species (protected and non-protected).

Main problem is that this area is known as a hotspot for sexual activities (homosexual but also heterosexual people meet there for sexual interaction) due to its densely wooded structure (many places to hide). The result is destruction of the natural monument and indecent exposure.

Main ES function: Nature protection / habitats for species (2)

Therefore, actions will be set to protect habitats and species. Details are part of the operational part of the IMMP.



Figure 7: Focus area Toter Grund

3) Bay Reichsbrücke

Description and problems:

The **Bay Reichsbrücke** is a valuable recreation area in the middle of the Danube Island. It is a structural river bay, which is connected to the Danube on one side. Main functions are recreational area for visitors and ecological compensation area for the hydro power plant "Freudenau".

Due to its location near the metro line this place is often used for drug dealers. Results are pollution (with high infective materials like syringes) and threats to other user groups.

Main ES function: Scientific/educational (1)

Therefore, actions will be set to preserve this function. Details are part of the operational part of the IMMP.



5. STRATEGIC MANAGEMENT OBJECTIVES AND GUIDELINES

STRATEGIC OBJECTIVE 1: Protection and preservation of the ecosystem Danube island (habitats, species and landscapes)

Strategic objective	Protection and preservation of the ecosystem Danube island (habitats, species and landscapes)
State (SWOT)	<p><i>Main strengths:</i> Areas for retreat and development areas for fauna and flora: - Existing habitat for beavers (legally protected) at the Zinkabachl - Existing habitat for dicesnakes (legally protected) at an area near the Ostbahnbrücke - Legally protected landscape areas in the northern and southern part of the island - Legally protected natural monument (Toter Grund)</p> <p><i>Weaknesses:</i> Public and open access. People are allowed to enter the protected areas and they disturb the peace or leave waste. Not enough information boards. Social fringe groups often use these places as their home or for drug dealing or sexual activities (hidden places)</p> <p><i>Possibilities:</i> - Establishment of greater biodiversity and “green bridges” - Regulation of user groups, information of visitors - Strengthen the acceptance of social fringe groups</p> <p><i>Threats:</i> Too high visitor pressure. Possible pollution. Vandalism.</p>
Guideline	<i>Visitor guidance and information guidance systems</i>
Detailed directions:	Visitor guidance through signage, information and guidance system (e.g. information boards – why works in forests are necessary, importance of nature conservation, etc.)
Responsible entity:	City of Vienna – Municipal Department for Water Management – Dep. 45
Needed participation:	City of Vienna – Municipal Department for Environment – Dep. 22
Coordination with other ES:	Recreation and tourism: the function of recreation should not be disturbed when implementing actions
Positive outcomes:	Preservation of valuable ecological diversity, ecosystems and species
Negative outcomes:	Ecological diversity suffers or dwindles due to persistently high visitor pressure (growing city)
Legal basis	Viennese Nature Conservation Act and Decree (refer to chapter 1.3).

STRATEGIC OBJECTIVE 2: Protection and preservation of the drinking water supply

Strategic objective	<i>Protection and preservation of the drinking water supply</i>
State (SWOT)	<p><i>Main strengths:</i></p> <ul style="list-style-type: none"> - existing water protection zone (legally) in the northern part of the island - backup for drinking water supply - no construction works possible, no livestock farming or grazing possible <p><i>Weaknesses:</i></p> <p>Use for visitors (and other uses of course) is restricted.</p> <p><i>Possibilities:</i></p> <p>Protect drinking water supply via stable numbers of visitors and guidance of visitors (make other areas attractive, information boards – e.g. why water supply is necessary).</p> <p><i>Threats:</i></p> <p>Possible pollution due to accidents: motorized vehicles are not allowed on the Danube island depart from vehicles for maintenance and special exceptions, but there are several bridges crossing the island and ramps onto the island (motorway, streets, metro line, city train, etc.). There are also several small roads for maintenance of the Island. Therefore, accidents could occur (oil, fuel, transport goods).</p>
Guideline	<i>Leave the area untouched (no further infrastructure and equipment) – set actions for users in other parts of the island</i>
Detailed directions:	No further actions in these areas. Other parts of the island should be made more attractive for visitors.
Responsible entity:	City of Vienna – Municipal Department for Water– Dep. 31
Needed participation:	City of Vienna – Municipal Department for Water Management – Dep. 45
Coordination with other ES:	No recreation areas possible
Positive outcomes:	Protection of drinking water supply
Negative outcomes:	None
Legal basis	Water Protection Act (refer to chapter 1.3).

STRATEGIC OBJECTIVE 3: Preservation of the function as large recreation area for the City of Vienna

Strategic objective	<i>Preservation of the function as large recreation area for the City of Vienna</i>
State (SWOT)	<p><i>Main strengths:</i></p> <ul style="list-style-type: none"> - Free relaxation room in the middle of the city - Good public access (public transport), no motorized vehicles allowed - Many possibilities for outdoor sports - many other user possibilities (grill zones, nudist areas, events, etc) <p><i>Weaknesses:</i></p> <ul style="list-style-type: none"> - Visitor pressure rises - Pollution (garbage), by homeless people, by drug dealers (infective material), by sexual activities (used condoms, etc.), by user groups (at grill zones), by large events (Donauinselfest) - different interests of user groups, different velocities (cyclists, joggers, inline-skaters), not enough space / no separation of user groups - free room and many places to hide: a place for social fringe groups (homeless people, drug dealers, sexual activities) <p><i>Possibilities:</i></p> <ul style="list-style-type: none"> - Restriction of special uses (e.g. barbecue areas) - Visitor guidance (zoning plan) - Better communication of behavioural codes (“Donauinselverordnung” – refer to chapter 1.2). - information and awareness rising - better communication and contact with social organizations <p><i>Threats:</i></p> <ul style="list-style-type: none"> - Too high visitor pressure - Conflicts between the visitors - Vandalism - destruction of ecosystems
Guideline	<i>Visitor guidance and better information, awareness rising</i>
Detailed directions:	Visitor guidance (zoning map or special places for special uses), more information (directly, information boards), better communication
Responsible entity:	City of Vienna – Municipal Department for Water Management – Dep. 45
Needed participation:	Stakeholders: all users and visitors of the Danube Island, social organizations, relevant authorities
Coordination with other ES:	Nature protection zones: no actions in legally protected areas Scientific / educational: combine actions
Positive outcomes:	Peaceful coexistence of all visitors despite increasing number of visitors
Negative outcomes:	Conflicts among the visitors, destruction of ecosystems
Legal basis	“Donauinselverordnung” – rules for behaviour, refer to chapter 1.2

STRATEGIC OBJECTIVE 4: Awareness rising and information of the importance of nature, biodiversity and forests

Strategic objective	<i>Awareness rising and information of the importance of nature, biodiversity and forests (education and science)</i>
State (SWOT)	<p><i>Main strengths:</i></p> <ul style="list-style-type: none"> - Danube Island has many possibilities for education (flora, fauna, floods protection), education in fresh air - easily accessible by schools, universities (good access - public transport) - high range for awareness rising (6 million visitors per year) <p><i>Weaknesses:</i> Possible disturbance during teaching from other visitors</p> <p><i>Possibilities:</i> Creation of new spaces to be used for education and science</p> <p><i>Threats:</i> Restrictions due to weather conditions Vandalism Social fringe groups are endangering children (e.g. pollution from drug dealers)</p>
Guideline	<i>Create infrastructure / equipment for educational / scientific purposes</i>
Detailed directions:	Create infrastructure for education in nature: establish an education path, transform places to a room for utilization for children (e.g. no place for drug dealers anymore)
Responsible entity:	City of Vienna – Municipal Department for Water Management – Dep. 45
Needed participation:	City of Vienna – Municipal Department for Environment – Dep. 22 University of Natural Resources and Life Sciences (BOKU) Vienna Schools – Dep. 56 Vienna Kindergartens – Dep. 10 Social organizations
Coordination with other ES:	Nature protection: teach also right behaviour in the nature Recreation and tourism: no recreation available during the “lessons”
Positive outcomes:	Awareness raising
Negative outcomes:	No use of additional educational infrastructure / places
Legal basis	None

6. GOVERNANCE

The City of Vienna has the great advantage that all properties on the Danube Island are managed by the City administration (ownership: public bodies – please refer to chapter 2.1). The responsibility for the implementation of the strategic plan lies with the City of Vienna, Municipal Department for Water Management, Dep. 45 (responsible for implementation of URBforDAN project).

The focus areas are exclusively managed by the Municipal Department for Water Management, Dep. 45. All actions and activities which are not co-funded by the EU (via URBforDAN project) are financed by the Municipality of Vienna.