

DANUBE-AUEN NATIONAL PARK, VIENNA, AUSTRIA

Section	 <p>CLEARINGHOUSE 中欧城市森林应对方案</p> <p><i>This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 821242</i></p>
1	TITLE OF CASE STUDY AREA: Danube-Auen National Park, Vienna, Austria
2	<p>INTRODUCTION (max. 150 words)</p> <p>Donau-Auen National Park (German: Nationalpark Donau-Auen) covers 93 square kilometres in Vienna and Lower Austria and is one of the largest remaining floodplains of the Danube in Middle Europe.</p> <p>Donau-Auen National Park has a rather unique position among the National Parks of Europe. The Park is situated in the east of Vienna, the capital city of Austria, with a population of 1.7 million. A large percentage of the national park's area lies within the city boundaries of Vienna (22nd district) and within the boundaries of Groß-Enzersdorf, a small municipality in Lower Austria. Settlements and areas of intensive agriculture surround the park.</p> <p>During the major river engineering phase for the Danube between 1870 and 1885, this former dynamic floodplain has been disconnected from the main channel by the construction of a flood protection levee. Lateral embankments along the main river channel have severely altered the geomorphic and hydrological dynamics and have impeded the natural sequence of erosion and sedimentation (Hein et al. 2006; Hohensinner et al. 2008). Nowadays, the floodplain can be separated into two subareas (Upper and Lower Lobau) that differ considerably in their ecological characteristics.</p> <p>Despite the hydrological deficits, the Lower Lobau still harbours a diverse and complex mosaic of aquatic, semiaquatic, and terrestrial habitats, resulting in a high biodiversity. Therefore, the Lower Lobau is an integral part of the "Nationalpark Donau-Auen" since 1996 and was designated a Natura 2000 area by the EU. Beyond the ecological value, the Lower Lobau plays a central role in the landscape water balance. It serves as an important drinking water reservoir for the City of Vienna. The protection of the floodplains gained in importance compared to the use as recreation area, which for decades had been the major focus.</p>
3	<p>KEY FACTS AND FIGURES OF THE CASE STUDY AREA</p> <p>Biogeographic region¹: Continental Surface area: 93km² (city area) Country: Austria Region/Province: Vienna and Lower Austria</p>

¹ <https://www.eea.europa.eu/data-and-maps/data/biogeographical-regions-europe-3>

<p>4a</p>	<p>LOCATION MAP(S)</p> <p>The figure consists of three maps. The top-left map shows Central Europe with countries like Austria, Czechia, Slovakia, Hungary, and Croatia. The top-right map is a closer view of Vienna and Bratislava, highlighting the Danube-Auen National Park. The bottom map is a detailed map of the Danube-Auen National Park, showing the Danube river and surrounding green spaces. A legend below the map identifies various features: Wald (Forest), Wiesen (Meadows), Gewässer (Water bodies), Ortsgebiet, Straßen (Settlement area, Roads), (Au)Gebiete außerhalb NP (Areas outside NP), Fuß- und Radwege (Foot and bicycle paths), Wanderwege (Walking paths), Marchfeld- und Rückstaudamm (Marchfeld and backflow dam), Stützpunkt (Support point), Naturbadeplatz (Natural bathing area), Zeltplatz (Camping site), Information, and Anlanden, Betreten, Baden erlaubt (Landing, access, bathing allowed).</p>
<p>5</p>	<p>NAME OF MUNICIPALITY AND WEBSITE ADDRESS City of Vienna: https://www.wien.gv.at/english/ Donau-Auen National Park: https://www.donauauen.at</p>
<p>6</p>	<p>LEAD ORGANISATIONS:</p> <ul style="list-style-type: none"> "Nationalpark Donau-Auen GmbH", a non-profit organisation formed by the Austrian federation and the provinces of Vienna and Lower Austria
<p>7</p>	<p>LOCAL CONTACT(S) DI Edith Klausner National Park Director Telefon +43 2212/3450 nationalpark@donauauen.at</p>
<p>8</p>	<p>PRINCIPLE UF-NBS (Urban Forests as Nature-Based Solutions) ACTION(S)</p> <ul style="list-style-type: none"> A "green ribbon" connecting the conurbations of Vienna and Bratislava; The largest complete, (near) ecologically intact natural riverine environment of its kind in Central Europe; Characterised by the nearly free-flowing Danube, which here retains the character of an alpine stream; An interplay of ecosystems which exhibit an enormous variety of habitats, plant and animal species; Home and refuge to many endangered plant and animal species; Impresses with its great natural beauty; Natural retention area for floodwaters; Guarantee for high-quality drinking water resources;



	<ul style="list-style-type: none"> • So-called "green lung" and climactic regulator for the region; • Recreational area for the population 															
9	<p>OTHER PRINCIPLE NBS ACTION(S) – non-UF</p> <ul style="list-style-type: none"> • Encourage engagement of citizen with local green and green initiatives; • Provide a foundation for spiritual, scientific, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally compatible 															
10	<p>LOCAL STAKEHOLDERS LIST ONLY</p> <ol style="list-style-type: none"> Governing authorities: "Nationalpark Donau-Auen GmbH", a non-profit organisation formed by the Austrian federation and the provinces of Vienna and Lower Austria Associations: DANUBEPARKS association Citizens: volunteers, residents from neighbourhood, "Vienna Woods School – Lobau", "National Park Camp Lobau" Municipalities: Municipality of Vienna, Groß-Enzersdorf Public/private institutions: Austrian National Forests (ÖBf) Operations; Lobau National Park Administration, City of Vienna Municipal Department 49 (Forestry Office and Urban Agriculture). The ÖBf Operations in the Donau-Auen National Park at Eckartsau, and the Lobau National Park Administration, City of Vienna Municipal Department 49 (Forestry Office and Urban Agriculture) are units of the national park administration and as such are responsible for carrying out management activities as ÖBf and City of Vienna on the areas of the national park owned by the federation. Park planner and authorities: City of Vienna Municipal Department 49 (Forestry Office and Urban Agriculture) Technicians for park maintenance/monitoring and to educate and support citizens: Lower Austrian National Park Advisory Board; Vienna National Park Advisory Board; Local Advisory Boards (participation of the individual national park municipalities); Scientific Advisory Board (Experts from the fields of zoology, botany, limnology, agriculture, forestry, urban planning, landscape architecture, and water management are appointed and dismissed at the recommendation of the Nationalpark Donau-Auen GmbH) 															
11	<p>UF-NBS FRAMEWORK</p> <table border="1"> <tr> <td>a.</td> <td>UF-NBS typology</td> <td>Wetlands - Riparian forests (softwood and hardwood) and slope forests Riverbank green Urban forest Retention basin Urban grassland Green playgrounds</td> </tr> <tr> <td>b.</td> <td>Integration</td> <td>Built-up structure (accompanying buildings); Transport infrastructure (from the city), Nature conservation, Water regulation</td> </tr> <tr> <td>c.</td> <td>Network/connectivity</td> <td>The Park is situated in the east of Vienna, the capital city of Austria, with a population of 1.7 million. A large percentage of the national park's area lies within the city boundaries of Vienna (22nd district) and within the boundaries of Groß-Enzersdorf, a small municipality in Lower Austria. Settlements and areas of intensive agriculture surround the park. Thus, accessibility to the park is provided and regulated.</td> </tr> <tr> <td>d.</td> <td>Multifunctionality</td> <td>Multiple functions are combined with trees with regulating services (water protection and retention, carbon sequestration; regulation of micro, local and/or regional climate), supporting functions (habitats and biodiversity for animal and plant species), cultural functions (recreational value, aesthetic pleasure; sense of place, inspiration)</td> </tr> <tr> <td>e.</td> <td>Multi-scale</td> <td>Maintaining the long-term character of the area and its ecological functions is the main challenge that park association face, due to high recreational potential and visits to the areas, as well as the expanding of the city area. Park administration run different educational and</td> </tr> </table>	a.	UF-NBS typology	Wetlands - Riparian forests (softwood and hardwood) and slope forests Riverbank green Urban forest Retention basin Urban grassland Green playgrounds	b.	Integration	Built-up structure (accompanying buildings); Transport infrastructure (from the city), Nature conservation, Water regulation	c.	Network/connectivity	The Park is situated in the east of Vienna, the capital city of Austria, with a population of 1.7 million. A large percentage of the national park's area lies within the city boundaries of Vienna (22nd district) and within the boundaries of Groß-Enzersdorf, a small municipality in Lower Austria. Settlements and areas of intensive agriculture surround the park. Thus, accessibility to the park is provided and regulated.	d.	Multifunctionality	Multiple functions are combined with trees with regulating services (water protection and retention, carbon sequestration; regulation of micro, local and/or regional climate), supporting functions (habitats and biodiversity for animal and plant species), cultural functions (recreational value, aesthetic pleasure; sense of place, inspiration)	e.	Multi-scale	Maintaining the long-term character of the area and its ecological functions is the main challenge that park association face, due to high recreational potential and visits to the areas, as well as the expanding of the city area. Park administration run different educational and
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			<p>cultural programmes to raise awareness of the specificity of this area. It also worked on the establishing of a network of Danube Protected Areas, which already started in 2007. The cooperation has been started in the course of two projects supported by the EU Programmes ETC-SEE (European Territorial Cooperation, South-East Europe) Programme. Years of intensive work ultimately resulted in the founding of the DANUBEPARKS association in August of 2014, thus ensuring long-term and vigorous cooperation in future. In January 2017, a further project called DANUBEparksCONNECTED implemented measures to strengthen the Danube as a habitat corridor and to promote ecological connectivity. DANUBEparksCONNECTED was financed by the EU Interreg Danube Transnational Programme and ended in November 2019. Numerous measures for habitat improvement and species protection were successfully implemented along the Danube in the course of the project together with partners from protected area and forest administrations, the energy sector and navigation.</p>
f.	<p>Strategic planning processes</p>		<p>Park management now has the task to fulfil both the demands posed by intensive daily recreational use and by the need to protect the floodplains' forested landscape.</p> <p>The Vienna-Bratislava region is now a dynamically developing European central region with strong settlement growth and large infrastructure projects, some of which are in potential conflict with the Donau Auen national park.</p> <p>Management planning in the next period (2019-2028) is focused on: Debris management, renaturation for the Danube (implementation of the renaturation ("optimization") measures), innovation in river engineering, completion of the forest conversion, abandonment of hunting infrastructure, Provision of firewood, meadow preservation.</p> <p>Depending on the financial means, the national park will be expanded in accordance with the provisions of the agreement in accordance with Art. 15a B-VG on the basis of voluntary agreements with the landowners.</p> <p>The importance of buffer zones for the national park is part of a combination of urban planning instruments (designation as a landscape protection area, strategy for upgrading as a recreation area in the urban development plan 2025) and design measures. The "Neue Lobau" is a 240-hectare agricultural area between Lobaugasse and Esslinger Furt on the border to the national park, in which the City of Vienna in cooperation with the district, the local Agenda 21 and Bio Research Austria has created and further developed new natural open spaces in the vicinity of the national park.</p>



<p>g.</p>	<p>Inter- and transdisciplinary</p>	<p>[Redacted]</p>	<p>The Lobau, one of Vienna’s finest local recreational areas, forms an important part of the Donau Auen National Parc. This largely unspoilt treasure of nature, one of the last of its kind in Europe, includes not only the riverside areas of the Danube in Lower Austria but also extensive floodplains of the rivers March and Thaya in regions close to the border with Slovakia and the Czech Republic.</p> <p>Awakening an understanding for the valuable and finely balanced eco-system is the objective of the EU INTERREG III A project Danube Floodplain Nature Education. Here the development of a “Danube floodplain interactive educational and recreational nature programme” represents an important step in this direction. The project is the responsibility of the Forestry Office of the City of Vienna (MA 49) and project partners in the Czech Republic (LIPKA in Brno) and in Slovakia (DAPHNE in Bratislava).</p>
<p>h.</p>	<p>Social cohesion and biocultural diversity</p>		<p>The national park administration offers a wide range of excursions for different target groups. The offer ranges from boat excursions in rubber dinghies, canoes or the Vienna National Park boat to guided hikes and bike tours to a variety of special themed excursions.</p> <p>The national park administration has developed a range of basic media and communication channels that will be continued or further developed. Folders, brochures, the national park newspaper, mailings, the image archive and the website are the basis of the communication measures. In the next few years, greater use will be made of social media such as Facebook and Instagram as well as other online media in order to reach other target groups as well. Events, exhibitions and campaigns are carried out as part of the public relations work.</p>
<p>i.</p>	<p>Governance arrangements</p>	<p>I. Project management structure.</p> <p>II. Local community engagement and the nature of their engagement.</p> <p>III. City-scale and/or region-wide governance for the project and/or UF-NBS (city and regional stakeholders and character of their engagement)</p> <p>IV. National and international governance context (national and international stakeholders and</p>	<p>"Nationalpark Donau-Auen GmbH", a non-profit organisation formed by the Austrian federation and the provinces of Vienna and Lower Austria</p> <p>Engaged as volunteers, and as a part of various programmes and camos organised by park</p> <p>Cooperation by Vienna and Lower Austria provinces in the management of the park.</p> <p>Danube region cooperation in connecting nature parks.</p> <p>Cooperation with the region of Bratislava, which influence also the park management.</p>



		character of their engagement)	
		V. Other (specify)	n/a
j.	Institutional frameworks	I. Project staff responsibilities.	n/a
		II. Project Management Committee (Y/N) if Y.	Y
		III. Frameworks <u>above the project</u> that exert influence on the project and/or UF-NBS e.g. Municipality, National Forestry Department.	With the creation of the Donau Auen National Park those responsible set themselves the goal of safeguarding the course of the natural cycle of animals and elements, of protecting and encouraging the characteristic fauna and flora including their habitats and providing visitors with a unique experience of nature. Hunting and fishing in the National Park are permitted solely within the framework of the Hunting and Fishing Management Plans. Currently, the plans that have been worked out apply for three years.
		IV. Private companies that work on behalf of/or are embedded within the project.	n/a
		V. Trade representative organisations that are involved in the project	n/a
		VI. Regulatory frameworks that the project operates within (i.e. bylaws, municipal laws, national laws, licences and leases, partnership agreements etc)	<p>Federal Law</p> <ul style="list-style-type: none"> • Agreement in accordance with Article 15a of the federal constitution between the federation and the provinces of Lower Austria and Vienna on the establishment and maintenance of a Donau-Auen National Park (Federal Law Gazette I No. 17/1997) • Federal Law on the foundation of and share in the Nationalpark Donau-Auen GmbH (Federal Law Gazette No. 653/1996) • Ordinance of the Ministry of Science and Transportation, with which the waterways and traffic ordinance, the lake and river ordinance, and the navigation ordinance are amended (Federal Law Gazette II No. 237/1999) <p>Provincial Laws Vienna</p> <ul style="list-style-type: none"> • Agreement in accordance with Article 15a of the federal constitution between the federation and the provinces of Lower Austria and Vienna for the establishment and maintenance of a Donau-Auen National Park (Provincial Law Gazette for Vienna No. 7/1997) • Law on Donau-Auen National Park (Vienna National Park Law) (Provincial Law Gazette for Vienna No. 37/1996, version PLG for Vienna No. 18/2006) • Ordinance of the Vienna Provincial Government regulating the determination and apportionment of



			<p>the National Park area (Vienna National Park Ordinance) (Provincial Law Gazette for Vienna No. 6/2003)</p> <ul style="list-style-type: none"> • Management plan for the Donau-Auen National Park <p>Lower Austria</p> <ul style="list-style-type: none"> • Agreement in accordance with Article 15a of the federal constitution between the federation and the provinces of Lower Austria and Vienna for the establishment and maintenance of a Donau-Auen National Park (Provincial Law Gazette 5506-0) • Lower Austria National Park Law (Provincial Law Gazette 5505-1) • Ordinance on the Donau-Auen National Park (Provincial Law Gazette 5505/1-0) • Ordinance on the designation of the Donau-Auen National Park (Provincial Law Gazette 5505/2-0) • Management plan for the Donau-Auen National Park
		VII. Other (specify)	n/a
k.	Economic frameworks	I. Community fundraising	n/a
		II. Project delivered services and monies raised by project	n/a
		III. City, regional general funds	n/a
		IV. Special funds e.g. National Lottery, Challenge funds	n/a
		V. National government funds	The Donau-Auen National Park extends over two federal states and is jointly supported by the federal government. The organization and financing of the national park is regulated in an agreement according to Art. 15a B-VG between the federal government and the states of Vienna and Lower Austria.
		VI. Private sector investment	The Donau-Auen National Park has partners from the business world who have helped support the work of the National Park for years. Some provide financial support, others participate in joint projects, while yet others even send their employees on work assignments in the great outdoors. All of these efforts are invaluable and essential to the National Park, which is financed solely through public means. Some of partners: Ströck, Donau Versicherung, Swarovski Optik
		VII. International funds e.g. European Union structural funds, LIFE + etc.	EU projects (Interreg)
		VIII. Other (specify)	n/a
I.	Sino/European comparative		Vienna is the 6th-largest city by population within city limits in the European Union. According to UN-Habitat,



	relevance		<p>Vienna could be the fastest growing city out of 17 European metropolitan areas until 2025 with an increase of 4.65% of its population, compared to 2010 (UN Habitat 2015)</p> <p>A large number of green areas, an outstanding public transportation network, green energy and lively markets have turned Vienna, the former imperial capital, into the greenest city. It occupies 1st place in the city ranking of the "greenest" metropolises (Bestcities, 2020).</p> <p>Although Vienna is not comparable to Chinese cities, it also suffers from densification, its speed and ways to tackle that in times of increasing climate change impacts are very relevant.</p>
	m. UF-NBS valorisation		<p>Situated between the European capitals Vienna and Bratislava, the Donau-Auen National Park preserves the last remaining major wetlands environment in Central Europe. Here, the Danube is still free flowing and is the lifeline of the National Park. It creates a habitat for numerous animals and plants, some of which are rare species.</p>
	n. Procurement of UF-NBS		n/a
	p. Ecosystem services (list the three most important services being provided in no more than 50 words)		<p>Multiple functions are combined with trees with regulating services (water protection and retention, carbon sequestration; regulation of micro, local and/or regional climate), supporting functions (habitats and biodiversity for animal and plant species), cultural functions (recreational value, aesthetic pleasure; sense of place, inspiration)</p>
	q. Renaturing		<p>The project is financed by budget of provinces. There are some finances coming from some international projects focusing on specific activities/programmes, and activity of some private companies that sponsor some events.</p>
12	LESSONS AND TRANSFERABILITY (max. 100 words)		
	<p>The Donau-Auen National Park preserves the last remaining major wetlands environment in Central Europe, which illustrate importance of its preservation. Management and activities of the park show how important and challenging is to balance between different demands of protection, recreation, and urban expansion.</p>		
13	REFERENCES (Harvard style)		
	<p>Donau-Auen National Park website, https://www.donauauen.at/?language=english</p> <p>Manzano, C. 2019. Nationalpark Donau-Auen Managementplan 2019 – 2028 https://infothek.donauauen.at/fileadmin/Infothek/3_GeschichteNPDA/32_GeschichteNPDAabErricht/321_GeschichteNPDAgmbHMedien/3211_Managementplaene/32113_Managementplsene_W_NOE/Managementplan_2019_2028.pdf</p> <p>UN-Habitat. 2015. "City population by country" https://web.archive.org/web/20150925074331/http://www.unhabitat.org.io/en/inp/Upload/1052216_Data%20tables.pdf</p>		



Bestcities, 2020 <https://www.bestcities.org/news/2020/04/22/the-worlds-greenest-cities/>

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