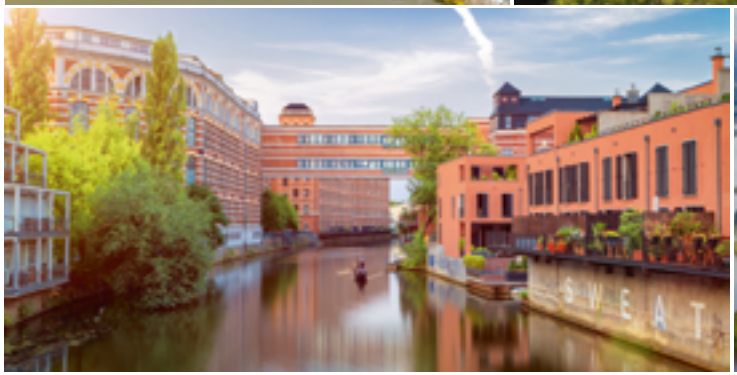


WORLD CANALS CONFERENCE
2022
LEIPZIG




Leipzig Logbook

Position Paper for Future-Oriented Management and Design of Inland Waterways

Stadt Leipzig

IWI
Inland Waterways International

Foreword

Dear Readers,

With its program of lectures and excursions, the World Canals Conference 2022 (WCC) in Leipzig impressively illustrated that inland waters worldwide are facing a wide variety of challenges: climate change, associated drought periods, but also flooding, increasing utilization pressure, dwindling biodiversity and unstable water quality, changes in the importance and use of water bodies, etc. There is an extraordinary need for action – especially with regard to the climate and biodiversity crises.

At the same time, the speakers at the WCC were also able to show that many interesting and effective approaches already exist, e.g., through the transformation of post-mining landscapes, the harmonization of different uses, the renaturation of water bodies, flood protection adapted to floodplains and locations, socially just and environmentally friendly uses, international networking, and so on.

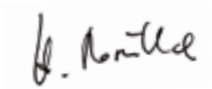
Nevertheless, much more remains to be done.

The City of Leipzig and the region of Central Germany feel very strongly about reconciling the use of water bodies as spaces for adventure, recreation and health care, but also in their functions for flood protection, ecology, biodiversity and the implementation of the European Water Framework Directive. For this reason, too, it has been a special pleasure and honor for the “water city” Leipzig in the middle of the new lake district Neuseenland to have hosted this special international conference.

As a result of the cooperation of a wide range of stakeholders in the field of inland waters, this very Leipzig Logbook presented here has been created to remind decision-makers once again of their responsibility for current circumstances and to future generations.

Particularly in urban regions, water bodies are the gateways to sustainability and a vital local resource for the sustainable development of a community, which must be preserved, developed and promoted.

We would like to express our sincere thanks to all regional, national and international supporters, without whom the WCC Leipzig 2022 would not have been possible on this scale and in this diversity.



Mayor Heiko Rosenthal
Scientific Organization WCC, Leipzig

Rudy Van der Ween
Inland Waterways International

Background

The Leipzig Logbook is a position paper written in the context of the **World Canals Conference Leipzig (May 30 – June 03, 2022).**

The World Canals Conference (WCC) represents an **international platform** for the topic of inland waterways sponsored by **Inland Waterways International (IWI)**[1]**.** For more than 30 years, it has brought together hundreds of experts, scientists, representatives from politics and administration, associations, companies as well as water sports enthusiasts and tourists from all over the world.

The WCC[2] was held in Germany for the first time in 2022 and was prepared by an extensive **consortium of various experts from Germany.** The core theme in Leipzig was the **transformation** of a lignite mining area into a diverse and tangible waterscape in Central Germany. The extensive conference and excursion program illustrated how, in the midst of any structural change (aside from mining), tourism, regional development, flood and environmental protection as well as urban renewal can be effectively promoted and intermeshed, while tackling the challenges of climate change at the same time.

Waterways have a lot to offer – they are true all-arounders (transport routes, leisure and exercise space, retention areas, places of biodiversity, relaxation and well-being and so much more). Leveraging these talents (potentials) requires a strategy of multiprogramming. In the process, sectoral interests are brought together, overlapped and interlinked. The multi-talented waterway therefore represents a joint task for many stakeholders. It’s not an easy one, but it’s one worth tackling.

1 www.inlandwaterwaysinternational.org
2 www.wccleipzig2022.com

Goals of the position paper

... recognizing, summarizing, sharing ...

Over 340 people from more than 19 countries joined WCC 2022 in Leipzig. The extensive lecture and excursion program clearly indicated that there are major challenges and great potential with regard to inland waterways.

Accordingly, this document will demonstrate the need for action on the one hand while relaying approaches for action on the other.

This position paper was **jointly developed by IWI and the scientific organizers of WCC 2022 based on the submitted conference papers.** It stands for a common set of principles and frameworks for the **forward-thinking high quality, diversity and multifunctionality of waterways.** Deciding factors include sustainable and integrative principles of action, authenticity, transparency and social responsibility. It also includes respect and sensitivity for the cultural uniqueness and local significance that the editors regard as essential for the development of water bodies and waterways and for the adaptation to climate change.

The Leipzig Logbook is a **handbook** for representatives from politics and administration as well as decision-makers; those responsible and committed to waterways – locally, regionally and worldwide. It provides impetus for new strategies of working and handling inland waterways in the future.

Call to action

The Leipzig Logbook aims to motivate the great number and variety of stakeholders in the field of waterways, to bundle their interests and efforts and to strengthen their positions in order to advance an integrated multifunctional development of waterways.

We call upon you: Use the Leipzig Logbook and demand that the people in power and the decision-makers take responsibility for the development of water bodies.

Core theses

The ten following theses reflect the demands on water bodies and how these can be met taking into account their importance for biodiversity, climate change adaptation and ecosystem services including the use of the bodies of water as waterways for goods transport and recreation. They present the status quo while demonstrating potential and the need for action.

1. **Sustainable inland waters require integrated approaches that reconcile and collectively address the consequences of climate change and increasing competition and utilization pressure.**
2. **The multifunctional nature of water bodies (e.g., utilization, providing recreational opportunities, ecological functions, biodiversity, health care and climate change adaptation) must be ensured through their near-natural design as well as the conservation and development of floodplains.**
3. **The supply of drinking water always takes priority over any other anthropogenic uses.**
4. **Industrial, commercial, agricultural and residential development as well as the use for tourism should be planned in an integrative manner, designed to protect water bodies and aligned with available water resources in terms of quantity and quality.**
5. **Waterways are public spaces. Equal access must be guaranteed for all groups of the public. The development of water bodies or water body networks requires public participation.**
6. **Water has a special meaning in the city. Urban water bodies contribute to climate change adaptation, enhance the quality of life and offer multiple opportunities for health protection and precaution. For them to fulfill these functions, structural conditions must be in place.**
7. **It is useful for stakeholders to coordinate their efforts relating to the integrated development of canals and inland waters for protecting them and improving their quality.**
8. **A functional waterway infrastructure is a basic prerequisite for recreational boating and water tourism. It must be modernized to meet demand and preserve its network character.**
9. **"Transformation" – A structural break/change can only be tackled through the interaction of all key players. This involves learning by doing, courage, innovation and people who are committed to the cause.**
10. **Internationality, networking, exchange and joint research must be expanded and supported with resources.**

Thesis 1

Sustainable inland waters require integrated approaches that reconcile and collectively address the consequences of climate change and increasing competition and utilization pressure.

With the brochure “Für saubere Gewässer in Sachsen” (“For clean waters in Saxony”) , the Free State of Saxony has shown water’s great importance. “**Clean and natural waters** serve us in a variety of ways, including as food, recreation, flood control and a raw material. Agriculture, fishing, energy and industry are all reliant upon water. About three-quarters of all jobs worldwide depend on water.”

Water serves as both a **source of life** and a **cultural asset.** To meet the demands of water management, water tourism, flora and fauna **under changing climate conditions** and the already noticeable consequences of climate change, water bodies require an **integrated approach** to their development and design. Water bodies take these demands into account and only through integrative planning and management can the challenges of **multifunctionality** be mastered.

The following four main areas are of importance in this context – depending on navigability or use as a transport route:

- Nature conservation (improvement of ecology, structure, interconnection, floodplain connection, habitat preservation/restoration, ...).
- Water management (reduction of pollution, improvement of hydromorphology, flood retention and flood protection, low water management, ...)
- Power control (especially important during low water, ecological optimization of power structures, ...)
- Traffic (maintenance or optimization of transport function and usability, ...)

San Antonio River Walk © desmarsol/Pixabay

1 State Office for Environment, Agriculture and Geology, Saxony (LfULG), 2017

... from the WCC Leipzig 2022 program

- German Elbe River Concept as overall strategy (GER)
- Water Management Challenges on the Unstrut River (GER)
- Urban Riverbank Development, Ecosystem Restoration and Flood Protection on the San Antonio River (US)
- Implementation of Nature-Based Flood Protection Measures in Brno (CZ)
- Waterways in Transition: Organization, Uses and Ecological Development (GER)
- Climate Change and Water in Central Germany (GER)
- Values and Valuation Concepts of Waterways in Changing Times (GB)
- Aquathermal Energy as a Sustainable Heat Source for the Energy Transition (NL)
- Resilience and Climate Justice in Waterway Development (GER)

Unstrut river, lock near Freyburg © Unstrutradweg

Svratka river in Brno – project visualisation © Kancelář architekta města Brna

Climate change in particular calls for a **rethink** in political and economic decision-making, the **discussion of values** and the **basic understanding of the importance** of nature-based solutions. Technical measures alone are not sufficient. Biologically engineered development of watercourses, stormwater management and the sponge city philosophy of decentralized temporary storage are just some of the forward-looking approaches. In principle, the development of water bodies should be **climate-resilient, close to nature and promote species diversity.**

Thesis 2

The multifunctional nature of water bodies (e.g., utilization, providing recreational opportunities, ecological functions, biodiversity, health care and climate change adaptation) must be ensured through their near-natural design as well as the conservation and development of floodplains.

Various societal needs, such as preparing for the consequences of climate change, implementing the EU Water Framework Directive, or even **restoring** a largely self-regulating waterscape in areas impacted by mining, call for the **reclamation** of water bodies that have been taken and, in individual cases, the restoration of those that have been removed. In industrial landscapes, the use of bodies of water, as transportation routes among other things, has often been prioritized over their preservation as ecosystems in the past.

... from the WCC Leipzig 2022 program

- River Restoration of the Lower Havel Lowlands (GER)
- Multifunctional Use and Management of River Floodplains and Waterways in the UNESCO Biosphere Reserve "Mittelelbe" (GER)
- Flood Protection on an Inland Waterway in Bydgoszcz (PL)
- Floodplain Development and Its Multifunctional Use (GER)
- Conversion of Emscher River: Structural Change Through Water Management (GER)
- Life and Resilience – The Challenges of the Backwaters in Kerala (IN)
- Waterways in Transition – Their Organization, Uses and Ecological Development (GER)
- Urban Revitalisation in Chinese Canal Cities (CN)

In the course of implementing appropriate measures, special attention must be paid to the **near-natural design of water bodies.** The increase in number and severity of **high and low water phases** due to climate change, which is already visible but is expected to become even more pronounced in the future, calls for the development of watercourses that are both resilient and close to nature – preferably using bioengineering construction methods. Water-related civil engineering facilities that use the waterways as transportation routes, as well as the cargo and recreational vessels themselves, also require adaptability and flexibility to remain functional over a wide range of water levels.

Rivers must be given space. Preserving or restoring **floodplains as ecosystems and retention areas** is one of the measures with the highest priority. However, in order to protect settlement areas from the effects of floods, this does not preclude watercourse development, even by means of individual technical measures, but may be something that is necessary in individual cases to protect life, limb and significant material assets. The **ability** of water to flow freely through these bodies provides for the migration of fish, microorganisms and plants while facilitating water tourism at the same time. For this reason, existing obstacles, such as weirs, cascades or hydroelectric power plants, must be made at least passable by means of technical measures. With the possibility of reservoir management, the lakes created in the course of reclaiming open cast mines can contribute significantly to compensation during periods of high or low water. However, they also play an important role in expanding tourist offers.

Species diversity in water bodies is not only mandatory for the implementation of the EU Water Framework Directive and a desirable goal for observers, but is essential for keeping water bodies clean, as water chemistry and oxygen content can be significantly supported by the biological components.

Emscher river – today, 25 years ago © Emschergenossenschaft

Alleppey, Kerala © Sachinmtk

UNESO Biosphere Reserve "Mittelelbe" © LAU/ Stefan Ellermann

Thesis 3

The supply of drinking water always takes priority over any other anthropogenic uses.

As the **primary aliment,** drinking water is one of the most important foundations for sustaining human life. Therefore, the WHO has developed and continues to update guidelines for potable water quality as the authoritative international reference in drinking water hygiene and regulation. The EC Drinking Water Directive and its implementation at the national level regulate the protection and improvement of drinking water quality.

The term clean drinking water, or potable water in general, refers to water intended for drinking, food preparation, personal hygiene, and the cleaning of dishes and laundry. Its long-term consumption or use must not pose a risk to human health. This resource should be well protected so that it requires as little technical processing as possible.

Water resources – both surface and groundwater – are subject to **multiple forms of utilization pressures.** Decreasing water supplies often counteract society's pressure for industrial and landscape development. Therefore, drinking water protection areas were established to protect those resources used as drinking water.

In Germany, for example, water resources that have yet not been protected under water law should in future be named "priority and reserved areas for drinking water supply" in accordance with their need for protection, using the instruments available for regional planning to protect them. In addition, centralized control mechanisms should be put in place and, as a matter of principle, measures pursuing the following goals should be implemented:

- Strengthening **groundwater recharge** through retention and infiltration of precipitation in the area
- Stabilizing the **water supply,** slow and reduce flood flows, raise low flows
- Increasing the **water storage capacity** in open areas (e.g., reclamation of watercourses)
- Reduce **competing uses** (e.g., through research/testing/adjusting regulations on alternative water sources for uses that do not necessarily require drinking water quality).

In regions undergoing structural change, this also includes:

- climate-robust restoration of post-mining lakes and reclamation of streams affected by mining.

Waterworks Song Duong, Vietnam © Aone Deutschland AG

Kingfisher © Landesbund für Vogelschutz e.V., Rolf Blesch

Drought at Elbe river, Dresden © André Künzelmann/UFZ

... from the WCC Leipzig 2022 program

- **Waterways as a Drinking Water Resource for Metropolitan Cities in Vietnam (VN)**
- **Aquatic Plant Management to Improve Water Quality (GER)**
- **Water Balance Portal Saxony – Providing Data of Climate Change Impacts on Water Balance (GER)**
- **Management of Wastewater Treatment Plants to Improve Water Quality (GER)**
- **Drinking Water Management in Armenia (AM)**

Thesis 4

Industrial, commercial, agricultural and residential development as well as the use for tourism should be planned in an integrative manner, designed to protect water bodies and aligned with available water resources in terms of quantity and quality.

Every industrial, commercial and residential development, any form of agricultural use, transport on waterways and touristic use all require a **sufficient quantity and quality of water.** Water resources – both groundwater and surface water – are in short supply in many regions. In addition, the development of the global water quantity is expected to deteriorate within the context of climate change. Domestic and industrial wastewater discharges and the improper or excessive use of fertilizers and pesticides in agriculture pollute bodies of water and impede or alter the development of fish, microorganisms and plants in those bodies.

Therefore, it is imperative to develop locally appropriate **water management strategies** worldwide and to consider them when processing applications for new uses. **Economical use** of water is the top priority. Existing rights of use should be reviewed periodically in terms of need, actual use, and with reference to the development of water resources regarding their quantity and quality.

... from the WCC Leipzig 2022 program

- Nature Conservation Assessment of Water Tourism in Mining Lakes of the Rhenish Mining Area (GER)
- Water Tourism and Nature Conservation – Conflicts, Methods and Solutions (GER)
- Status of the Development of "Green" Emission-Free Navigation in Northern Europe (NO)
- Optimization of Wastewater Treatment and Stormwater Management to Improve Water Quality (GER)
- Sustainable Revitalization in the Port Area of Tbilisi (GE)
- Emission-Free Operation of Ferries (GER)
- Securing the Future of European Inland Navigation – NAIADES III Action Plan (EU Commission DG for Mobility and Transport)

Waterway intersection, Magdeburg
© Wasserstraßen- und Schifffahrtsverwaltung des Bundes, WSV

Peace Bridge at Mtkvari river, Tbilisi © Falco, pixabay

Hurtigruten use biogas © Hurtigruten

The following measures are examples of positive contributions:

- Riparian strips **managed in a way that protects the water** minimize the discharge of pollutants into water bodies and protect agricultural land from soil erosion by water.
- Domestic and industrial wastewater may only be discharged into water bodies after it has been **purified** in state-of-the-art wastewater treatment plants. This is the only way to reduce negative impacts on aquatic biota from chemicals, pharmaceutical residues, microplastics, etc., and to avoid a rise in temperature.
- Increasingly heavy precipitation is pushing wastewater treatment plants to their capacity limits more and more. Due to this development, and also to save water of drinking quality, the implementation of **near-natural solutions for rainwater management, including rainwater harvesting,** should be promoted. These can simultaneously fulfill other functions for humans and nature (cf. functions of green-blue infrastructure in urban areas).
- Various water sports and recreational uses must not interfere with each other or be detrimental to the environment and nature conservation. Clear rules of conduct must be defined for this purpose.
- In the case of touristic use – especially motor-driven navigation – care must be taken to ensure that neither motor oils nor fuels or cleaning agents pollute the waters. A time limit on the use of fossil fuel powered drives (e.g., until the year 2030) should be implemented. **Environmentally friendly and ecological alternatives,** such as electromobility or zero-emission propulsion systems on the water, should be given preference and continuously promoted while, at the same time, expanding the appropriate charging infrastructure in a suitable manner.

Thesis 5

Waterways are public spaces. Equal access must be guaranteed for all groups of the public. The sustainable development of water bodies or water body networks requires public participation.

Sustainable watercourse development requires **public participation.** This starts with establishing transparency regarding water use and development, but also includes ensuring benefits and usability for the public. From conceptualization to planning to maintaining the functionality of a water body, there is a need to **generate** broad **interest and understanding** as well as to harness and honor the **commitment** of many.

The development of water bodies will not be understood to serve the general interest in every case. But even in comprehensible projects of flood protection and nature conservation, interests and opinions clash. When uncontrolled, this costs money and effort on all sides. A sustainable and integrative approach to developing water bodies must therefore take into account the **various aspects of protection and use** from the outset and, at the same time, make the public aware of their own **individual responsibility.** This also comes with the opportunity to pool resources. Citizens can recognize it as their personal responsibility to develop a consensus on use and planning. To this end, they must be given access to all relevant information. At the same time, the processes must be open-ended and unbiased unless restricted by higher law. The public not only includes the relevant clubs and associations, but also specifically initiatives, regional companies and individual citizens themselves.

Future waterfront development, especially in urban settings, must always give high priority to **multidimensionality** in the context of **social equity.** Fields of action such as education, health promotion, implementation of measures for more environmental justice as well as civic commitment and adaptation to climate change can be implemented particularly effectively through measures on or around bodies of water.

River swimming in Basel © Lucia de Mosteyrin Muñoz

Citizen Science © FLOW-Projekt, Julia von Gönnern

... from the WCC Leipzig 2022 program

- **Waterway Regeneration and Development of Public Recreational Uses at the Scottish Canals (GB)**
- **Swim-City Basel – Urban River Swimming (CH)**
- **Waterway Connection Karl-Heine-Kanal, Saale-Leipzig-Kanal (GER)**
- **Citizen Science Projects for Data Collection, e.g., Water Quality Monitoring (GER)**
- **The Historic Elsterfloßgraben Canal: Preservation and Use with the Help of Volunteers (GER)**
- **Brook Restoration with Citizens – Examples of the Metropolitan Region of Hamburg (GER)**
- **Delaware and Hudson Canal (USA)**

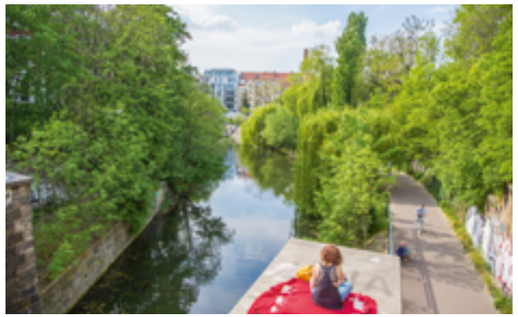
Public participation, watercourse development in Scotland © Scottish Canals

Thesis 6

Water has a special meaning in the city. Urban water bodies contribute to climate change adaptation, enhance the quality of life and offer multiple opportunities for health protection and precaution. For them to fulfill these functions, structural conditions must be in place.

Sustainable, attractive and healthy urban and regional development requires surface waters. These can be of natural origin, anthropogenically modified or artificially created. They are always inseparable from and interact with the surrounding landscape.

Waters are **integrating and connecting elements,** providing structure and **creating identity,** but also have ecological, experiential and socio-cultural aspects; not to mention their great role for leisure and recreation.



Karl-Heine-Kanal, Leipzig
© PK | Fotografie www.pkfotografie.com Philipp Kirschner

The so-called urban blue has a variety of positive health effects:

- The **ecosystem services** (e.g., mitigation of air and noise pollution, fresh air supply) that regulate and provide as well as a strong **climate-ecological balancing function** (e.g., humidity and cooling effects) contribute to mitigating the impacts of climate change.
- Water bodies have strong **psycho-social effects** through their aesthetics, symbolic meanings and the establishment of a regional identity.
- Their attractiveness inspiring physical **exercise, recreational function** and balance of the stimuli from modern life have been scientifically proven.
- **Social interaction,** experiential education and other socio-cultural aspects are very much alive in urban waterscapes.

Urban water bodies therefore represent ideal, versatile and popular places for physical and mental activities close to home as well as sites of social interaction. With the challenges of climate change, but also increasing densification of cities, urban water spaces must be made sustainably usable or preserved as space for recreation, activities and encounters. **Access and use** must be guaranteed for the urban population.

In combination with the urban green, the blue-green infrastructure is a key factor in the quality of life in cities/urban regions as well as for sustainable developments in the future. It offers the best conditions for implementing approaches to adapt to climate change, support health care and improve environmental justice.

... from the WCC Leipzig 2022 program

- **Stuttgart Region: Rivers in Metropolitan Areas as Gateways to Sustainability (GER)**
- **Research on the Impact of Urban Blue Infrastructure on the Health of Urban Populations (UK)**
- **Opening Waterways and Revitalizing Old Port Facilities in Ghent (BE)**
- **Success Factors for the Redesign of Urban Waterways (FR)**
- **The Water City of Leipzig: Natural River Courses, Floodplain Forest and Revitalized Canals (GER)**
- **Open Space-Oriented Urban Development – Green-Blue Infrastructure as a Driver in Leipzig (GER)**
- **Urban Blue Space and Health: Roadmap for Canal Renewal (GB)**

Neckar river floodplain, Marbach © iba27 StadtRegion Stuttgart GmbH, VRS/Stoppel

Thesis 7

It is useful for stakeholders to coordinate their efforts relating to the integrated development of canals and inland waters for protecting them and improving their quality.

Many canals and inland waterways represent and illustrate a **cultural heritage.** This can be related to social structures, identity, cultural history, technological innovation and landscape development. An integrated approach that combines these different aspects is needed to do justice to this historical legacy and, at the same time, future challenges. This means that the development of inland waterways should always incorporate **sustainable and inclusive principles of action,** professional ethics, authenticity, intellectual integrity, social responsibility, respect, and sensitivity to cultural uniqueness and local significance.

The following four dimensions of quality provide an appropriate basis for action:

- The **natural** quality: e.g., water quantity and quality or the soil condition, geology, flora and fauna – in water bodies and the adjacent landscape.
- The **cultural** quality: e.g., cultural history and cultural innovation, engineering design and architectural features.
- The quality of the **utilization:** e.g., accessibility, variety of uses, economic value, multiple uses of the space
- The quality of the **experience:** e.g., spatial diversity, activity space, quiet environment, open spaces, etc.; individually and group-related

Existing programs from EU cooperation and research funding, such as Interreg, the European Route of Industrial Heritage, UNESCO (including intangible cultural heritage), etc., can also serve to support the coordination and collaboration between the diverse and numerous stakeholders.

... from the WCC Leipzig 2022 program

- Historical Heritage and Industrial Culture at the Finow Canal (GER)
- Historical Karl-Heine-Kanal in Leipzig (GER)
- Water Supply for the Restoration of the Ulster Canal in Ireland (IE, GB)
- Multifunctionality of Flemish Waterways (BE)
- Transformation and Regional Cooperation of the Former Coal Transport Route Bat'a Canal in Moravia (CZ)
- Historical Vistula Bridge in Tczew (PL)

Bata Canal © CzechTourism

Lock at Finow Canal © Julia Pollok

Scottish Canals © VisitScotland

Thesis 8

A functional waterway infrastructure is a basic prerequisite for recreational boating and water tourism. It must be modernized to meet demand and preserve its network character.

In Germany, the Federal Ministry of Transport presented the “Master Plan for Leisure Navigation” in June 2021 as a roadmap for the future of leisure navigation and water tourism. It includes an urgently needed, large-scale and sustainable strategy that encompasses infrastructure, shipping, digitization, environmental protection and nature conservation as well as communication/cooperation as fields of action:

Harkotsee bypass channel, Ruhr river © Ruhrverband

- Water tourism is an important economic factor[1] and a driver for the development of rural areas. Moreover, waterways create recreational quality for the inhabitants of rural areas and sustainably strengthen those areas as living space.
- The basic prerequisite for recreational boating and successful water tourism is a functioning waterway infrastructure. However, there is a considerable investment backlog – and not only in Germany – regarding the secondary waterways that are primarily used for tourism.[2]
- The fields of action also include measures to provide a need-based and customer-oriented infrastructure, such as upgrading the infrastructure in the area of sports and recreational boating, as well as support for improving the water tourism infrastructure under third party control.
- For such plans and concepts to have a practical impact, the necessary financial and human resources must be made available. Infrastructure measures must be implemented swiftly in order to clear the investment backlog and preserve the network character of the waterways.

1 Annual gross revenue from tourism on federal waterways in Germany: 4.2 billion euros. Source: Federal Ministry of Economic Affairs, The economic potential of water tourism in Germany, 2016.

2 The average age of locks on secondary waterways in Germany is 105 years, and 75 years for weirs.

Kanał Elbląski © Mazury Travel

... from the WCC Leipzig 2022 program

- Development of Water Tourism Infrastructure in North Brandenburg, “WIN – Water Tourism Initiative” (GER)
- Infrastructural Challenges of Water Tourism (GER)
- Economic Potential and Impacts of Tourism on Inland Waterways (GER)
- New Model and Adapted Infrastructure for Touristic Use of the Elbląg Canal (PL)
- Technical Heritage of the Elbe-Vltava Waterway (CZ)

Lock Fürstenberg © WInTO GmbH

Thesis 9

“Transformation” – A structural break/change can only be tackled through the interaction of all key players. This involves learning by doing, courage, innovation and people who are committed to the cause.

As the starting point for the national mining industry, the Central German Lignite Mining District was shaped over some 150 years in equal measure by the high technologies of its time, jobs and value creation and dramatic environmental degradation. The aftermath of the economic and monetary union and German reunification in 1990 saw an unparalleled **structural upheaval,** for which there had been no conceptual precedent at the time. Through the **cooperation of all key stakeholders** (politics and administration on the state and municipal levels, mining companies, science, associations and individual citizens), the region was able to overcome the “planning vacuum” within a few years and create conditions for the development of a new water tourism destination. It was gradually implemented over the course of remediation of the old mines based on an administrative agreement between the federal government and the states that was concluded in 1992 and has remained in force to this day. Active mining was reduced to a fraction of its 1989/1990 level and given a state-of-the-art power generation base in the form of the new Lippendorf and Schkopau power plants.

“From miner to sailor” was the motto of the development of the Central German Lake District with the Leipzig Neuseenland as its core area. Here, **structures** and activities such as regional conferences, urban planning competitions, lignite planning as a component of regional planning, the Leipzig Green Ring, water tourism concepts, and the Leipzig Neuseenland steering group all played key roles in successfully shaping the process and thus also bringing about a **change in the region’s image.**

At times, this was associated with an approach based on the principle of “learning by doing”, since in many cases blueprints for design were lacking and setbacks, for example due to geotechnical events, had to be overcome. Nevertheless, it can be stated today that the **historic opportunity** to transform an industrial landscape into a leisure and recreational landscape has been seized, which contributes substantially to the attractiveness of the “boomtown” Leipzig and its surrounding area.

As a result of an **extensive discourse** and subsequent legal stipulations, it is now certain that the German lignite age will end between 2030 and 2038, and in central Germany by 2035 at the latest. The framework to strengthen the structure has been designed to create replacement jobs to maintain social order, bring innovation to fruition and complement these post-coal landscapes. This process contains **potential and imponderables,** the latter also against the backdrop of current debates on the security of supply in the energy sector, which require the most proactive action possible as well as a bundling of forces.

The success of the activities in the Rhineland, Central Germany and Lusatia, and thus on the largest landscaping construction sites in the world, will determine whether and to what extent positive impetus can be provided for comparable developments in the neighboring countries of Poland, the Czech Republic and other regions worldwide.

… from the WCC Leipzig 2022 program

- Challenges and Best Practice of Transformation in the Central German and Lusatian Mining Areas (GER)
- Strategies for Safeguarding Water Quality in the Post-Mining Waters of the Leipzig Neuseenland (GER)
- Structural Change and the Labor Market in the Coal Mining Region of Appalachia (USA)
- Development of a Lake Landscape in the Rhenish Mining Area (GER)
- Development Potential and Challenges of Water Management in the Former Coal Region of Ústì (CZ)
- Transformation of Sand and Clay Pits into Living Environments for Nature, Recreation, Tourism and Culture in Antwerp (BE)
- Transformation from a Coal Mining to a Tourism Landscape in the Ha Long Region (VN)
- Geiseltalsee – From Coal Mining to Wine Growing (GER)

KAP Zwenkau, aerial view 2017 © Andreas Berkner

Richwood, West Virginia, Appalachia
© Jeffrey Greenberg/Universal Images Group via Getty

Thesis 10

Internationality, networking, exchange and joint research must be expanded and supported with resources.

Events such as the World Canals Conference significantly contribute to increasing the focus of decision-makers on the challenges, potential and great significance of waterways and inland waterways. They also impressively illustrate the necessary and interdisciplinary expertise for preservation and contemporary development.

Continuous **international networking, professional exchange of experience and knowledge transfer** are indispensable elements to meet the complexity of the challenges around the globe. The experiences and findings of other countries and regions form a very large pool of knowledge from which a great deal can be learned through sound networking and communication platforms. This is also an essential prerequisite for an adapted application of the best practices to local conditions.

Those working in the field of water bodies are particularly aware of the dimensions that transcend nationalities and states and, accordingly, are especially well-suited to recognize and exploit the possibilities of integrative approaches.

Stakeholders involved in the development of waterways and inland waters should make greater use of the opportunities offered by informal and formal international networks for the exchange of best practice experience, as well as European and international **funding programs** for research and the exchange of experience.

In addition, policymakers are called upon to promote **interdisciplinary and cross-border** collaboration, joint international research and global exchange.

Sports and cultural activities on/near waters can promote this international interaction.

Project- and topic-related collaboration must be promoted through participation in international water-related associations (PIANC, NIWE, IWI). This then also optimizes access to EU funding.

Lake Sevan, Armenia © Adam Jones

... from the WCC Leipzig 2022 program

- **Elbe/Labe – Transboundary River with Challenges in Low and High Water and Other Uses (DE/CZ)**
- **Qualification Needs of the Engineers and Specialists of Tomorrow (GER)**
- **Joint Research of PIANC and IWI on Inland Waterway Plannung (NL)**
- **Global Water Partnership Supports Integrated Water Resources Management to Achieve SDG 6 (AM)**
- **EU-Funded projects NEYMO and NEYMO-NW – Transboundary Water Management in the Framework of the German-Polish Border Water Commission (PL/DE)**
- **Transboundary Implementation of the European Water Framework Directive (EU-WFD) with the Elbe River Protection Commission and the Odra River Commission (PL/DE)**

Canal cities in China
© WCCO – World Historic and Cultural Canal Cities Cooperation Organization

Flood at Elbe river @ City of Dresden, Environmental office

Authors

The Leipzig Logbook was created based on the conference papers in collaboration with a Germany-wide collective of authors from the scientific organization behind WCC.

Major contributions came from Dr. Carlo W. Becker (bgmr Landschaftsarchitekten GmbH), Prof. Dr. Andreas Berkner (Regional Planning Association Leipzig-West Saxony), Helko Fröhner (Elbe Waterways and Shipping Authority), Prof. Hartmut Ginnow-Merkert (Our Finow Canal Association), Steffen Heling (Saxony-Anhalt State Office for Flood Protection and Water Management), Dr. Sabine Heymann (Water City Leipzig Association), Karin Kuhn (formerly Saxon State Office for the Environment, Agriculture and Geology), Julia Pollok (WIN – Water Tourism Initiative North Brandenburg) and Gesa Schwoon (Federal Ministry of Transport and Digital Infrastructure) as well as David Edwards-May and Rudy Van der Ween from IWI.

This text was compiled by Natalia Garcia Soler, Frieda Prochaska and Angela Zábojník from the Office for Urban Green Areas and Waters of the City of Leipzig.

The contributions to WCC Leipzig 2022 have been published in the special issue WasserWirtschaft Extra (issue S1 | 2022, 112th volume, ISSN (Print) 0043 0978 | ISSN (Online) 2192-8762 www.springerprofessional.de/wawi).

Acknowledgement

A major thank you goes to all supporters and comrades-in-arms from all over Germany, without whose professional input, intensive networking, great enthusiasm, constant persuasiveness and practical collaboration, the preparation and execution of the WCC Leipzig 2022, as well as the publication of the Leipzig Logbook, would not have been possible.

Despite the challenges of the COVID-19 pandemic and the war in Europe, those involved have shown great staying power, making the extraordinary scope and special quality of WCC Leipzig 2022 possible.

Imprint

Publisher
City of Leipzig
Office of Green Space and Waters

Inland Waterways International (IWI)

Contact
stadtgruen.gewaesser@leipzig.de
www.leipzig.de/stadtgruen

Design
ungestalt. Kollektiv für Kommunikationsdesign, Leipzig.
www.ungestalt.de

Translation
Lehrer, Dolmetscher, Übersetzer Schönfeld & Partner
www.trans-lingo.com

Circulation
3rd edition (November 30, 2022)

The World Canals Conference is a project funded by the Saxon State Ministry for Regional Development according to the FR-Regio Directive, which is co-financed through tax funds on the basis of the budget adopted by the Saxon State Parliament.

Gefördert durch
Freistaat SACHSEN

Stadt Leipzig · LEIPZIGER MESSE · IWI · LEIPZIG REGION · LEIPZIGER NEUSEENLAND

We would like to thank our supporters: Bundesministerium für Digitales und Verkehr · Bundesverband eMobilität e.V. · Bundesverband Wassersportwirtschaft e.V. · Ferropolis GmbH · Gemeinde Belgershain · Gemeinde Borsdorf · Gemeinde Großpösna · Gemeinde Rackwitz · Günter Papenburg AG · Helmholtz-Zentrum für Umweltforschung UFZ · Industrie- und Handelskammer zu Leipzig · IHK Halle-Dessau · IHK Ostbrandenburg · KUHNLE-TOURS GmbH · Landesbetrieb Hochwasserschutz und Wasserwirtschaft Sachsen-Anhalt · Landestalsperrenverwaltung Freistaat Sachsen · Landkreis Altenburger Land · Landkreis Anhalt-Bitterfeld · Burgenlandkreis · Landkreis Leipzig · Landkreis Nordsachsen · Landkreis Saalekreis · Landkreis Salzlandkreis · Landkreis Wittenberg · Leipziger Muldenland e.V. · LMBV mbH · MIBRAG mbH · Ministerium für Wirtschaft, Tourismus, Landwirtschaft und Forsten des Landes Sachsen-Anhalt · Regionaler Planungsverband Leipzig-Westsachsen · Saale-Unstrut-Tourismus e.V. · Sächsischer Motorwassersportverband · Sächsisches Staatsministerium des Innern · Sächsisches Staatsministerium für Energie, Klimaschutz, Umwelt und Landwirtschaft · Sächsisches Staatsministerium für Regionalentwicklung · Sächsisches Staatsministerium für Wirtschaft, Arbeit und Verkehr · Stadt Böhlen · Stadt Brandis · Stadt Halle (Saale) · Stadt Leuna · Stadt Markkleeberg · Stadt Markranstädt · Stadt Pegau · Stadt Rötha · Stadt Taucha · Stadt Zwenkau · Stadt Schkeuditz · Tourismus und Marketing Gesellschaft Sachsen · Unser Finowkanal · Verein für Industriekultur e.V. · Wasser-Stadt-Leipzig e.V. · Wasserstraßen- und Schifffahrtsverwaltung des Bundes · Wassertourismus Initiative Nordbrandenburg · WelterbeRegion Anhalt-Dessau-Wittenberg e.V. · ZV Kommunales Forum Südraum Leipzig · ZV Lausitzer Seenland Sachsen

The map shows an overview of the diverse waterscape in Central Germany. Post-mining lakes, near-natural rivers, artificial canals and urban mill races form a multifunctional landscape network that characterizes the region. All details can be viewed in high resolution in the online version of the map at **www.wccleipzig2022.com**