



VOIES NAVIGABLES D'EUROPE
INLAND WATERWAYS OF EUROPE

A map of Europe is shown in white outline against a light blue background. The landmasses are filled with a light blue hatched pattern. The text 'FINAL REPORT' is overlaid on the map in a dark blue, bold, sans-serif font.

FINAL REPORT



North Sea and Channel
INTERREG IIC

10 PARTNERS
5 THEMES
1 AIM

“Making more of the Inland Waterways of Europe.”

ABOUT VNE

Voies Navigables d'Europe (VNE) brings together 10 partner organisations from 10 countries to develop their inland waterways under the umbrella of Interreg IIIC. VNE focuses on tourism, recreation and heritage as a means of supporting urban and rural regeneration.

The European network of navigable inland waterways – canals, rivers and lakes – extends right across the continent. The network was developed for the transport of people and goods from early times and fuelled Europe's industrial revolution in the 18th and 19th centuries.

However on many waterways the transport of goods has now declined or disappeared. Indeed on many waterways, navigation has ceased entirely, although the waterway may still exist for other reasons. In recent years, the historical importance of the cultural heritage of the waterway network has become recognised, while waterways are becoming increasingly significant for tourism and recreation and as a focus for urban and rural regeneration. This has led to a drive to re-open and revitalise abandoned or under-used waterways.

To further the development of Europe's canals and rivers for tourism, recreation and heritage, the network Voies Navigables d'Europe (VNE) (Inland Waterways of Europe) has been established, supported by the European Union Interreg IIIC programme. VNE brings together 10 partner organisations from 10 countries around Europe. By taking account of the multi-functional use of waterways, VNE aims to maximise the opportunities they present in terms of

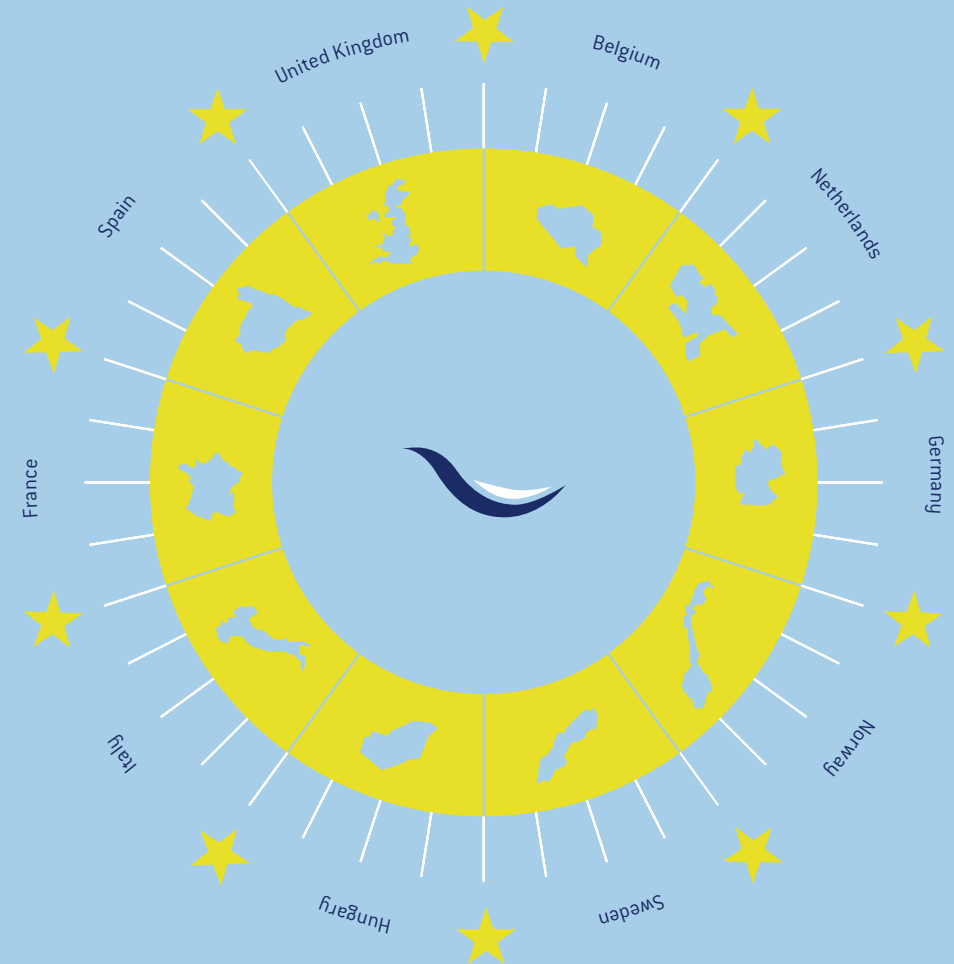
employment and training and enhancing the quality of life of Europe's citizens.

VNE runs as a formal network supported through Interreg from 2005 to the end of 2007 and is led by British Waterways, the main inland navigation authority in the United Kingdom.

Five themes in particular have been considered through VNE and reviewed and investigated through a series of workshops and seminars. These are:

- / Europe's interconnected network of recreational heritage waterways;
- / The economic development of waterways, particularly through tourism and recreation;
- / Sustainable urban and rural regeneration;
- / Waterways and the natural environment;
- / The cultural heritage and built environment of waterways.

THE VNE PARTNERSHIP



EUROPE'S INLAND WATERWAYS

Navigable waterways extend across most of the European territory. Many of the waterways are still important for freight arteries, while on others the transport of goods has virtually ceased. However all waterways are becoming increasingly significant for the quality of life of Europe's citizens.

There are navigable inland waterways in most countries in Europe, ranging from major international river navigations, such as the Rivers Rhine and Danube to small rivers and artificial canals. Inter-connected waterways link the Atlantic Ocean in the west with the Black Sea in the east and the Mediterranean Sea in the south with the Baltic Sea in the north.

It is estimated that there are now more than one million motorised pleasure boats on the inland waterways of EU member states, and the sector is growing at around 5% per annum. Management of waterways varies from country to country. The Rivers Rhine and Danube are international waterways governed by treaty. In some countries, such as France, Ireland and the United Kingdom, the majority of waterways are managed by national authorities. In others, such as Netherlands and Germany, the strategic freight waterways are controlled at a federal level, but the development of smaller waterways is the responsibility of regional or local administrations. In other countries, responsibilities are entirely at a regional or local level. Most waterways are controlled by public administrations, but a few are owned or managed by the voluntary or private sectors.

Many types of tourism and recreation activity take place on and around inland waterways.

Activities on the water include sailing and pleasure boating and various forms of water sports. On the banks and towpaths there are opportunities for a range of activities, including angling, walking and cycling. Visitors drawn to the waterways contribute to the economy of the waterway corridor through expenditure on local goods and services. In addition the water environment is attractive to developers, thus facilitating the regeneration of waterside communities. In many of Europe's towns and cities, major regeneration schemes are under way focussing on the waterway asset. In rural areas, through tourism and recreation, waterways are helping sustain the viability of services for the local population, such as shops, pubs and post offices.

Waterways provide recreational opportunities for people close to where they live, thus enhancing their health and well-being and general quality of life. Historic waterway structures such as locks, bridges, tunnels, aqueducts, harbours and warehouses are prime examples of Europe's built industrial heritage, particularly of the 18th and 19th centuries.



Besides recreation & tourism and cultural heritage, inland waterways have other inter-related roles and functions – freight transport, water management and supply, power generation etc. There can be incompatibility and conflict between these various functions and uses, which needs to be managed carefully.

In 1992 a classification system was adopted for the larger freight waterways by the European Conference of Ministers of Transport (ECMT). Waterways were classified according to dimensions and by the type of freight craft that can use them. In 2000, the Permanent International Association of Navigation Congresses (PIANC) produced the report 'Standards for the use of inland waterways by recreational craft' (PIANC Bulletin No. 103, 2000). This established a dimensional classification system for recreational waterways, effectively extending the ECMT classification to 4 types of smaller, primarily recreational canals and rivers.

Subsequently the PIANC proposal was accepted as part of a unified classification system by the United Nations Economic Commission for Europe (UNECE) for adoption as a resolution. VNE reviewed the practical applicability of the classification to waterways in Europe.

Most countries felt that, in principle, the system could be applied. However for some administrations the dimensions aren't entirely appropriate and some form of adaptation would be necessary to allow the classification to adequately reflect the nature of the waterways in that country.

EXAMPLE OF OUR PROJECT WORK

Classification Study

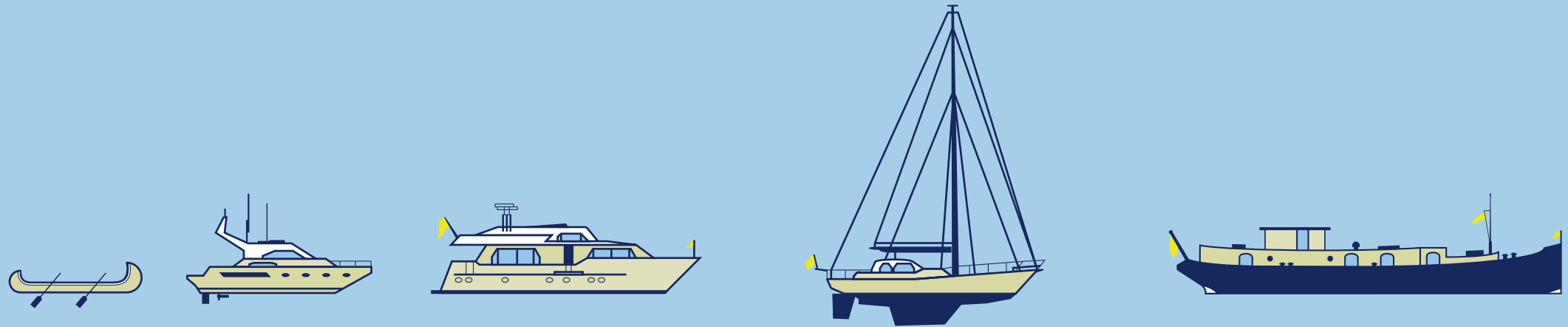
»Review Classification of Recreational Waterways«

The United Nations Economic Commission for Europe (UNECE) has proposed the establishment of a dimensional classification system for recreational waterways.

The practical implications of such a system have been reviewed through a number of INTERREG IIIB projects. Under VNE work the recreational network of Europe as a whole were identified and mapped. From this, gaps and bottlenecks in the network, such as missing links and currently un-navigable historic waterways have been identified.

Responsible partner: SRN (NL)

RECREATIONAL NAVIGATION CLASSIFICATION



DESIGNATION	OPEN BOAT	CABIN CRUISER	MOTOR YACHT	SAILING BOAT	MOTOR BARGE
CLASS	RA ^[1]	RB ^[2]	RC ^[3]	RD ^[4]	I ^[5]
MAX. LENGTH (m)	5.5 m	9.5 m	15.0 m	15.0 m	38.5 m
MAX. BEAM (m)	2.0 m	3.0 m	4.0 m	4.0 m	5.05 m
DRAUGHT (m)	0.5 m	1.0 m	1.5 m	2.1 m	1.8 – 2.2 m
MIN. HEIGHT UNDER BRIDGES	2.0 m	3.25 m	4.0 m	30.0 m	4.0 m

[1] Small craft, such as open boats, outboard motor boats, canoes, rowing boats, inflatables and dinghies.

[2] Small and medium size cabin cruisers or cabin sailing boats with lowering masts.

[3] Large motor yachts.

[4] Sailing boats where the lowering of the mast is difficult or impossible.

[5] Smallest of the ECMT freight classes.



MAXIMISE THE OPPORTUNITIES

A number of economic activities need to be taken into account.

Europe's waterways are important catalysts for economic development. They support the economic vitality of the regions adjacent to the waterways and stimulate business by the public sector.

Inland waterways have a number of economic functions:

- / Tourism and recreation, which is the focus of VNE;
- / Sustainable transport – not only freight and passenger transport by water, but also walking and cycling use of the banks and towpaths;
- / Water supply and transfer;
- / Irrigation for agriculture;
- / Power generation – mainly hydropower, but also heat exchange and wind turbine opportunities along the banks.

Specific economic activities aren't always compatible. Ways need to be found to balance the competing requirements of different sectors. For example water recreation may be difficult to accommodate in areas of heavy freight traffic. The needs of irrigation may compete for water supply with those of navigation.

Specific topics addressed through VNE and other Interreg projects in relation to tourism and recreation development include:

- / Marketing, interpretation, promotion and information provision, particularly using new

communication tools, such as geographic information systems and mobile technology;

- / The development of marinas and moorings for boats, including quality standards, sustainable facilities (sanitary stations, waste disposal etc.), improved links between marinas and nearby towns and villages, better visitor welcome, on-site information and issues related to nature conservation and environmental management;
- / Skills development, especially in entrepreneurship, marketing and marina management;
- / New product development, such as travel packages bringing together different types of activity (e.g. boating and cycling) and the creation of new activities (e.g. skating on canals in Winter);
- / Business networking and co-operation to encourage entrepreneurship, new business development and the clustering of activities;
- / Stimulation of businesses by the public sector;
- / Economic regeneration of rural areas through the re-use of old waterside buildings and working with farmers to encourage agricultural diversification.



MUCH CAN BE DONE

Improve possibilities for environmental friendly boating.

The natural environment of our waterways needs to be managed sensitively. VNE investigates issues related to environmental boating, especially with regard to the impact of the Water Framework Directive.

Inland waterway recreation takes place on and around the sensitive water environment. Tourism and recreation has a lower adverse environmental impact than many other activities around water – particularly agriculture, industry and sewage/waste disposal. Indeed the re-opening or creation of new waterways can add to the stock of Europe's water environmental resources. Nevertheless much can be done to mitigate possible adverse environmental and ecological impacts from water tourism and recreation.

The implementation of Europe-wide legislation such as the Water Framework Directive has given impetus to such measures. The Water Framework Directive requires managers of water bodies to address issues of ecological, as well as chemical quality, while global considerations such as climate change have emphasised the need to look to measures to reduce atmospheric emissions. A number of Interreg projects are investigating these topics.

For example the IIB North Sea Region Canal Link and IIB North West Europe Crosscut projects investigated water pollution from recreational craft, while ecological issues arising from boating and waterway management were considered through the IIB North West Europe Crosscut and Liens Bleus projects.

Most powered recreational craft make use of diesel engines. However alternative propulsion systems are now being developed. Through Interreg, there have been actions to promote these new technologies for boating (e.g. through events for solar powered craft) and to pilot new types of boat operation (e.g. rental of electric-powered boats).

Of course water tourism and recreation also contributes to atmospheric pollution through the generation of road traffic associated with both water and land-based activities. Again Interreg actions have been developed to promote alternative access through walking and cycling and to work with public transport providers to encourage greater use of bus and rail transport.

Recreational boats can contribute to water pollution, although their impact is usually much less than from surrounding land uses. Under VNE an action took place to investigate how the various countries in Europe deal with pollution from recreational craft. It was found that legislation on "black" water (i.e. sewage waste) varies between countries. In some areas vessels are allowed to discharge waste directly into the water. In others holding tanks are required on board the vessel. This suggests that there may be a need for EU intervention in this area.

THE NATURAL ENVIRONMENT

The Water Framework Directive extends environmental protection in the water environment from chemical to ecological quality. Although artificial and heavily modified water bodies will have less stringent requirements regarding ecological quality than for other types of water, there is a requirement to manage all waterways in such a way as to secure good ecological potential. This is especially important for waterways undergoing restoration to navigation. Under VNE, research has taken place to investigate management strategies and mitigation measures to achieve good ecological potential.

Through other Interreg projects various practical actions undertaken trial some of these measures to reduce adverse ecological impacts, such as:

- / Ecological channel designs and hard and soft bank protection;
- / Ecological boat hull and propeller design;
- / Management of “boat” traffic, through restricting boats and boat movements or educating boaters in good ecological behaviour;
- / Good practice in vegetation management;
- / Sustainable dredging practices, including the disposal of silt.

Other environmental issues addressed through Interreg projects include:

- / Dealing with invasive species;
- / Measures to reduce disturbance of wildlife by visitors to waterways;

- / Measures to control silt accumulation in waterways, thus reducing the need for dredging;
- / Improvements to the landscape quality of the surroundings of waterways, through the restoration of brownfield sites and better integration of residential and industrial areas with the water;
- / Environmental clean-up campaigns to clear dumped rubbish, litter and debris from waterways, often involving volunteers from local communities or interest groups or from the staff of local companies.

EXAMPLE OF OUR PROJECT WORK

Environment Study »Environmental boating«

Although inland waterways are comparatively benign environmentally, boating can give rise to adverse environmental impacts – atmospheric emissions, water pollution, and ecological damage. The aim of this study is to investigate possible mitigation measures for smaller recreational waterways in northern and southern Europe.

Responsible partners:

British Waterways (UK), SIRGA (SP)

EXCHANGE EXPERIENCE AND GOOD PRACTICE BETWEEN »»

PARTNER ORGANISATIONS

THE VNE PARTNER MAP

-  [1] **United Kingdom:**
British Waterways (Lead partner)
-  [2] **Belgium:** Agentschap Waterwegen en Zeekanaal NV
-  [3] **Netherlands:**
Stichting Recreatietoervaart Nederland
-  [4] **Germany:** BIS Bremerhaven Touristik
-  [5] **Norway:** Telemark Fylkeskommune
-  [6] **Sweden:** Länsstyrelsen Värmland
-  [7] **Hungary:** Central Bureau of Water and Environment
-  [8] **Italy:** Regione Lombardia
-  [9] **France:** Association Union des Terres de Rivières
-  [10] **Spain:** Asociación de Pueblos Ribereños del Canal de Castilla





WHAT WATER PROVIDES

New opportunities opened up by restored waterfronts.

In recent years, inland waterways and other waterfront areas, such as old ports and harbours have become an important focus for the regeneration of both urban and rural areas.

The reason for this interest is because attractive waterfront developments often command higher values than those elsewhere within cities. Studies show that this is particularly true for residential properties, where the premium associated with a waterside location can be up to 20% of the value of the property. Waterfront developments benefit from the attractive and interesting environment that water provides. Boating activity is a key element of this, adding action and colour to the waterway scene.

Of course as well as bringing back to life waterfronts on existing water areas, it is also possible to create new water resources as a focus for regeneration. This explains the interest throughout Europe of restoring and revitalising old derelict waterways and even creating new waterway links. Many of the partners in VNE are actively involved in bringing old canals back into use. In Spain, the historic Canal de Castilla is gradually being re-opened to navigation.

In Lombardia (Italy) the canals and rivers of the region are being opened up. In Hungary there are plans to re-open the Sio Canal, linking Lake Balaton with the River Danube. While in the UK, Netherlands, Belgium and Germany there are many schemes to restore canals and rivers and to create new water links.

This activity is reflected in work being undertaken through other Interreg projects (see overview in infobox on the next page).

Through VNE consideration has been given to many issues associated with the revitalisation of historic waterways including:

- / The role of restored waterways in sustainable economic regeneration;
- / The economic and social impact of restoration schemes;
- / Funding of restoration works;
- / Key lessons in scheme delivery.

There is increasing recognition of the role that waterways and waterway-based developments can play in improving the well-being of people and communities, and in the way that well managed waterways can contribute to landscape quality, biodiversity and the conservation of cultural heritage.

The development of tourism and recreation within the waterway corridor brings together the community's needs for leisure and economic growth with an opportunity to experience and understand the historic waterway environment as part of a managed and protected landscape.

Inland waterways contribute to the social regeneration of local communities through:

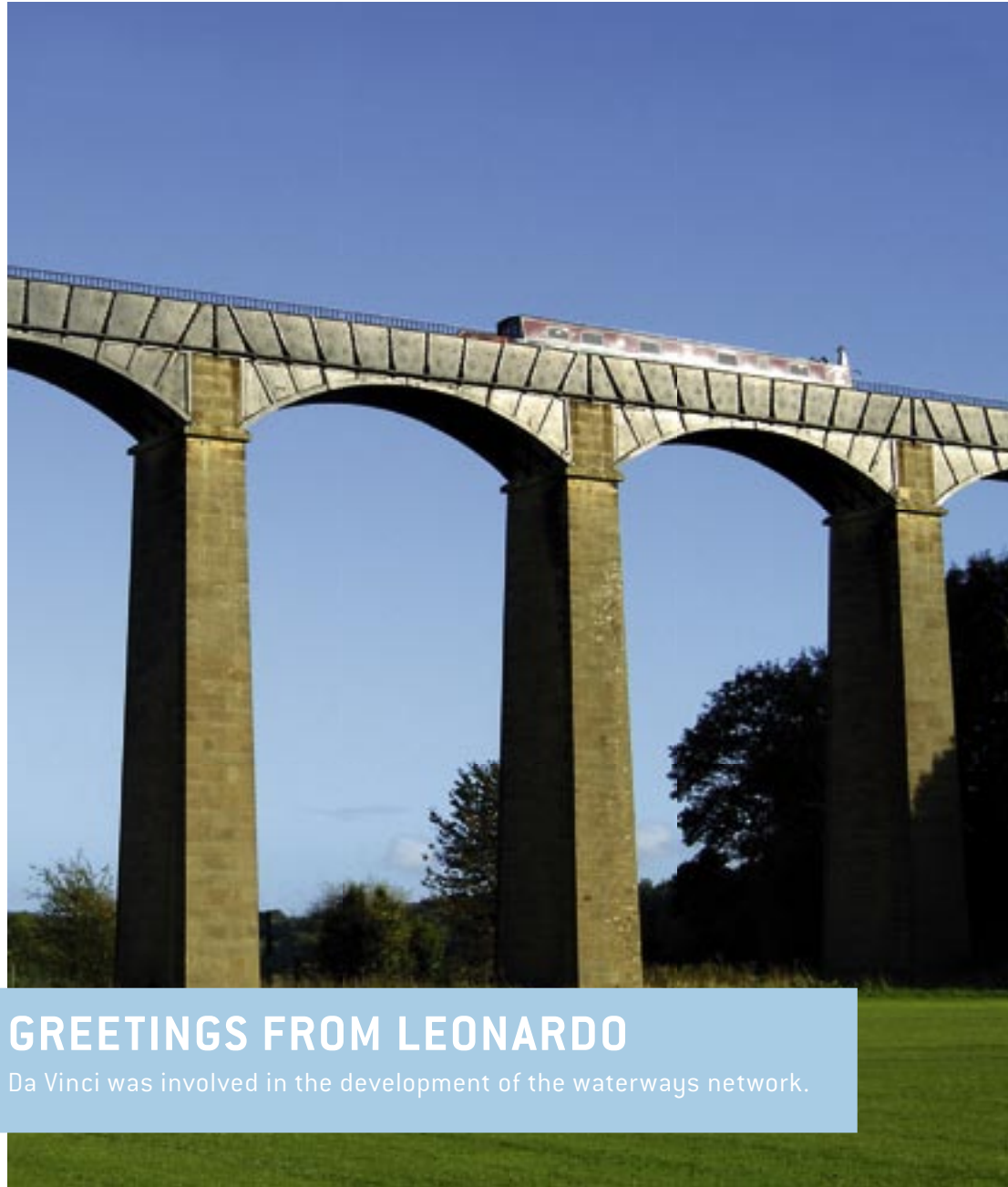
- / Education initiatives for local schools. Waterways form an outdoor learning resource or "classroom" for many subjects – history, geography, biology, environmental studies etc.;
- / Training & skills development. Waterway schemes can play a useful role in providing training and developing the skills of the local workforce. This is particularly true in the case of traditional or artisan building skills, which are now in short supply throughout much of Europe;
- / Increasing physical activity levels in the local populations. Recreation is recognised as having a key role in improving and maintaining health. Revitalised waterways provide free active recreation for local people, particularly through walking, cycling and canoeing opportunities;

- / Social exclusion. Waterways, especially in towns and cities, create recreational opportunities close to where people live, thus encouraging visits by people who might not otherwise have the confidence to go to outdoor recreation sites;
- / Community involvement: Local people can participate in the restoration and development of waterways in various ways. For example people can take part as volunteers in carrying out development works and in the on-going managing of the waterways. Also waterways provide a focus for community events and measures to secure community "ownership" of the resource, thus enhancing social capital.

INTERREG IIIB PROJECTS INCORPORATING WATERWAY RESTORATION INCLUDE:

- Programme:** North West Europe
- Project:** Crosscut (www.crosscut-nwe.eu)
Trust (www.trustpartners.org)
Water in Historic City Centres (www.wihcc.nl)
Maya (www.maya-net.org)
Liens Bleus (www.bluelinks2008.org)
- Programme:** North Sea Region
- Project:** Canal Link (www.canal-link.net)
- Programme:** Baltic Sea Region
- Project:** InWater (www.inwaterproject.org)

ENHANCING THE QUALITY OF LIFE OF EUROPE'S CITIZENS



GREETINGS FROM LEONARDO

Da Vinci was involved in the development of the waterways network.

Navigable inland waterways comprise a key and distinctive element of Europe's cultural heritage. Improving the possibilities for people to see and experience these assets is one of VNE's main aims.

Rivers and other water courses were made navigable from early times. Some of the earliest "modern" canals were developed in Lombardia, Italy from the 12th Century onwards, focussing on the city of Milan. Indeed Leonardo da Vinci was involved in the development of the network. In the 17th Century, the Canal du Midi was constructed in France, connecting the Atlantic Ocean with the Mediterranean Sea. By the 18th and 19th Centuries, the construction of the extensive network of waterways in England fulfilled the early transport needs of the Industrial Revolution.

Although some of the waterways have since been enlarged and improved to meet modern freight transport needs, many canals and canalised rivers have been retained in close to their original condition.

Elements of waterway heritage include:

- / Waterway structures such as locks, aqueducts, tunnels, bridges, boat lifts and inclined planes;
- / Historic boats used for the transport of goods and people;
- / Adjacent buildings and structures built to support activity on the waterways, such as inland ports and wharves, warehouses, cargo handling equipment, lock keepers' cottages etc.;

- / Small heritage items and artefacts, such as distance markers;
- / Cultural heritage elements, such as painting of boats and songs and stories associated with the waterways and their operation.

Interreg projects have looked at a number of issues associated with cultural heritage on inland waterways, including:

- / Techniques for the conservation of buildings and structures, including training in traditional skills such as brickwork, ironwork and stone masonry;
- / Re-opening of disused waterways and structures to secure their conservation;
- / The re-use of derelict waterside buildings, to stimulate economic activity, particularly in rural areas, while ensuring that the heritage is conserved;
- / The role of waterway museums and heritage-related visitor centres and related facilities;
- / Archives for the conservation of historic material and documents associated with waterways.

FURTHER OUTLOOK

»Making more of the inland waterways of Europe« is the main aim of VNE. Following on from VNE, a number of specific actions have been identified to be taken forward.

It is recognised that there is no single voice representing recreation and heritage waterways in Europe. An on-going VNE network has the potential to fill this role. European legislation, such as the Water Framework Directive and the forthcoming European Maritime Policy has potential impact for the smaller recreational waterways, so the role of an organisation such as VNE can become more important in the future.

Through VNE an investigation into the feasibility of creating a European Recreation Navigation Observatory (ERNO) was undertaken. It was recognised that there is no central European source of information on inland waterways for either professionals or waterway users. This leads to difficulties for people wanting to travel from one country to another. VNE has developed a framework for establishing such an Observatory and a number of partners are investigating options for implementation.

Also within VNE, a concept to develop a series of waterway events to showcase opportunities for the private sector was developed under the Profluvia banner. Again a number of VNE partners are considering how this concept can be progressed.

Both VNE and other Interreg projects focussing on inland waterways have identified a number of themes that should continue to be taken forward at a transnational level in the future.

These include:

- / Issues concerned with the environmental and ecological management of waterways, in the light of the Water Framework Directive;
- / Measures to extend the transnational network of recreational inland waterways through restoring derelict waterways, creating new water links and removing bottlenecks to navigation. This will help secure Europe's waterway heritage as well as creating new opportunities for waterway-related businesses, particularly SMEs in the tourism sector;
- / The stimulation of business development and entrepreneurship, based on the waterway resource;
- / Ensuring that lessons learnt through the various Interreg projects and the experiences of waterway administrations are shared with organisations in the New Member States. VNE has begun this process, but much more needs to be done to maximise opportunities for the sustainable future of the sector.

WATERWAYS FORWARD! WWW.VNE- WATERWAYS. EU

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