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Industrial heritage in Europe

Report[1]
Committee on Culture, Science, Education and Media
Rapporteur: Ms Ismeta DERVOZ, Bosnia and Herzegovina, Group of the European People's Party

Summary

The tangible and intangible components of industrial heritage form an essential part of European shared identity as they reflect a rich historic interaction through the transfer of skills and expertise, technology and processes across national boundaries.

However, the industrial heritage is highly vulnerable, most often lost for lack of awareness, documentation, recognition or protection, but also because of changing economic trends and difficult environmental issues or due to its overwhelming size and complexity. Public authorities should better understand and value the potential of industrial heritage, which can become a key element for sustainable territorial and socio-economic regeneration.

The report makes a number of practical recommendations to national decision-makers with a view to ensuring that the legacy of Europe's Age of Industry is safeguarded for future generations. At the European level, UNESCO and the European Union are invited to engage with the Council of Europe in developing a European label for the industrial heritage and to support the campaign of the European Federation of Associations of Industrial and Technical Heritage (E-FAITH) for a European Industrial Heritage Year in 2015.

1. Reference to committee: Doc. 12677, Reference 3799 of 3 October 2011.

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A. Draft resolution[2]

1. The Parliamentary Assembly recalls Europe's pioneering role in global industrialisation, which is also reflected by the majority of European industrial heritage sites which are included on the UNESCO World Heritage lists (36 out of 46). It believes that the European industrial heritage – including both its tangible and intangible components – is a building block of our shared identity as it reflects a rich historic interaction through the transfer of skills and expertise, technology and processes across national boundaries. The understanding and appreciation of this European heritage and its most significant sites must therefore be passed on to future generations.

2. The Assembly considers that the effective protection of the European industrial heritage would require a European label for the industrial heritage to provide an intermediary (European) level of protection for the sites of a clearly European, if not world, significance which would also cover the so-called "heritage constellations" (sites that are thematically or territorially interconnected).

3. The Assembly calls for continuous encouragement of public involvement and volunteer work that generates awareness and appreciation of the value of the industrial heritage and contributes through grassroots initiatives to designating for protection, preserving and converting to new uses thousands of industrial heritage sites across Europe. In this respect, the Assembly supports the campaign of the European Federation of Associations of Industrial and Technical Heritage (E-FAITH) calling for a European Industrial Heritage Year in 2015.

4. With a view to ensuring that the legacy of Europe's Age of Industry is safeguarded for future generations, the Assembly recommends that the member States of the Council of Europe:

4.1. sign, ratify and implement the European Landscape Convention (ETS No. 176) and the Council of Europe Framework Convention on the Value of Cultural Heritage for Society (CETS No. 199, "Faro Convention");

4.2. join the Council of Europe Enlarged Partial Agreement on Cultural Routes and the European Route of Industrial Heritage network (ERIH), which provide an excellent framework for concerted action to promote and preserve the European heritage at the national and international level;

4.3. include in the legislation on protection of historic sites specific criteria to be applied to industrial heritage, so that a greater number of sites can be designated for protection;

4.4. create interdisciplinary research teams, *inter alia* with scientific and technical expertise, to draw up and regularly update comprehensive inventories of the industrial heritage at regional and national level;

4.5. ensure that advisory panels composed of experts and representatives of official agencies work and take decisions in a transparent manner when considering sites for protection;

4.6. value volunteer expertise and create co-operation mechanisms to associate non-governmental organisations with various procedures related to the protection and effective management of the industrial heritage, and, when necessary, nurture volunteer resources by providing capacity-building initiatives;

4.7. value industrial heritage sites as part of a wider social landscape interconnected with skills and local memory and identity, and consider its potential as a key element of territorial development strategies;

4.8. encourage the establishment of a network of multidisciplinary task forces – bringing together expertise in relevant domains such as building history, monument protection, urban planning and financial strategies, investment and partnerships – to facilitate knowledge sharing in sustainable regeneration projects that are driven by rehabilitation of industrial heritage sites;

4.9. introduce measures to safeguard relevant disused industrial heritage sites from destruction, particularly in urban areas where land values are high;

4.10. enter all sites of interest into official planning databases or their equivalent, in order to enable constructive dialogue between property developers and conservationists;

2. Draft resolution adopted unanimously by the committee on 23 January 2013.

4.11. encourage community involvement, not only to preserve local testimonies and identity, but also to define the scope of regeneration projects;

4.12. when converting industrial buildings to new uses, introduce measures to guarantee respect of the character and the integrity of buildings, as well as the character of the community;

4.13. facilitate provision of resources through private/public partnerships to ensure that funds are available for heritage conservation within rehabilitation projects of industrial sites;

4.14. create partnerships with private and non-governmental organisations to raise awareness and appreciation of the value of the industrial heritage and seek interaction with other cultural resources and cultural heritages that are available locally, regionally and internationally (for example through cultural walks, cultural routes and networks, European Heritage Day events, theme activities, etc.).

5. The Assembly invites the European Union and UNESCO to:

5.1. co-operate with the Council of Europe in supporting the effective implementation of the Council of Europe Framework Convention on the Value of Cultural Heritage for Society and the European Landscape Convention with respect to the industrial heritage;

5.2. consider the possibility of launching, together with the Council of Europe, a European Industrial Heritage Year in 2015;

5.3. engage in a pan-European exchange and networking together with the Council of Europe and other relevant organisations having expertise in the industrial heritage, such as the European Route of Industrial Heritage network, the European Federation of Associations of Industrial and Technical Heritage and the Europa Nostra, with a view to:

5.3.1. developing guidance and financial incentives for the protection and preservation of industrial heritage sites across Europe;

5.3.2. establishing a catalogue of good practice and case studies drawn from a wide range of countries, highlighting the heritage conservation part in different projects;

5.3.3. providing an overview of Europe’s industrial heritage, either on a country-by-country basis or thematically, and preparing thematic (sector-by-sector) studies to underline the role of the industrial heritage in forging the European identity;

5.3.4. establishing a comprehensive and representative list of European industrial monuments;

5.3.5. studying how best to utilise potential energy sources in industrial buildings (reuse of the building structure, recycling of materials, etc.);

5.3.6. studying how best to reconcile ecological measures (for example European Union water directives), building standards and risk prevention norms with the preservation of the integrity of the industrial heritage.

6. The Assembly invites the Congress of Local and Regional Authorities of the Council of Europe to take account of the present resolution and to promote co-operation between local and regional authorities in the area of the protection and promotion of the industrial heritage.

B. Explanatory memorandum by Ms Dervoz, rapporteur

1. Terms of reference and preparation of the report

1. On 30 June 2011, Ms Rihter and 23 colleagues tabled a motion for a resolution on "Destruction or restoration of industrial heritage", which was referred to the Committee on Culture, Science, Education and Media for report on 3 October 2011. The committee appointed me rapporteur on 6 December 2011. In April 2012, Mr Keith Falconer, former head of Industrial Archaeology at English Heritage in the United Kingdom, was commissioned to prepare a background report.

2. On 28 June 2012 in Strasbourg, the Sub-Committee on Culture, Diversity and Heritage considered a draft outline for the report and on 21 September 2012, the Sub-Committee held a conference in Maribor, Slovenia, on the theme of industrial heritage, which was organised jointly with the National Assembly of the Republic of Slovenia, with the city of Maribor – European Capital of Culture – and with the Forum of Slavic Cultures.[3] I wish to thank Ms Rihter, former Chairperson of the Sub-Committee, who initiated this report, for her support in organising this very successful conference.

3. At its meeting from 2 to 4 October 2012 in Strasbourg, the committee decided to change the title of the report to "Industrial heritage in Europe". Mr Falconer, in the light of the rich discussions in Maribor, completed his report. The subsequent sections are built on the extremely valuable contribution and wise suggestions of Mr Falconer, Mr Hilderbrand de Boer, Vice-President of the European Route of Industrial Heritage (ERIH) and members of the Europa Nostra Industrial and Engineering Heritage Committee, to whom I am very grateful.

2. Objectives of the report

4. Europe is recognised as the cradle of industrialised society. The Industrial Revolution was pioneered in Britain in the 18th century, flourished in western Europe from the early 19th century and had spread throughout the European continent by the end of the 19th century. The new scale of industry was to transform society and lead to the globalisation of industry. However, it is not only the material manifestation of industry that has contributed to the European identity but also its intangible heritage. The staple industries of what is now being called the Great Age of Industry (coal, iron and steel, textiles and heavy engineering) may have largely disappeared, but the cultural testimonies live on.

5. European industrial heritage is a vast subject which in some countries has been a developing concern over the latter part of the 20th century. There has been a significant acceleration in interest across Europe from the 1960s onwards with international contacts built up and transnational conferences and projects initiated from the 1970s. The Council of Europe has shared these concerns and has been involved since the 1980s. Recommendation No. R (90) 20 of the Committee of Ministers recognised the need to promote awareness and appreciation of industrial heritage.[4] Much has changed since then with the collapse of communism in eastern Europe. As the subject matter is dynamic – chronologically, geographically and demographically – a constant stream of new sites and industries has to be considered for conservation, rehabilitation or reuse; industries decline, contract, change or re-organise and the immaterial component of this heritage should be documented by various media before the memory disappears.

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3. On this occasion, the sub-committee held an exchange of views with Mr Keith Falconer and the following experts: Ms Andrea Richter, former chairperson of the sub-committee and President of the Forum of Slavic Cultures, Slovenia; Mr Francesco Calzolaio, member of the Europa Nostra Industrial and Engineering Heritage Committee, Italy; Mr Hildebrand de Boer, Vice-President, European Route of Industrial Heritage (ERIH), the Netherlands; Mr Massimo Negri, European Museum Academy, Italy; Mr Stjepan Lončarić, Section for Architectural Heritage at the Zagreb Society of Architects (DAZ), Croatia; Mr Emir Softić, Commission to Preserve National Monuments of Bosnia and Herzegovina; Ms Aleksandra Berberih Slana, National Liberation Museum, Maribor, Slovenia; Mr Lawrence Fitzgerald, Riverside Museum, Glasgow Museums, United Kingdom; Mr Karl Borromäus Murr, Director of Staatliches Textil- und Industriemuseum Augsburg, Germany; Mr Alois Ecker, Department for Didactics of History, Social Studies and Civic Education, University of Vienna, Austria; Ms Katarina Živanović, Museum of Yugoslav History, Belgrade, Serbia; Ms Karla Oder, Carinthian Regional Museum, Ravne na Koroškem, Slovenia.

4. Recommendation No. R (90) 20 of the Committee of Ministers on the protection and conservation of the industrial, technical and civil engineering heritage in Europe (13 September 1990) puts forward, among others, the need to promote general awareness and appreciation of this heritage through campaigns directed at the public at large and through tourism.

6. Europe is justly proud of its industrial heritage, not least because it is a heritage which is universally recognised as being of profound international significance in the development of global industrialisation, but equally important, it is also locally the main provider of sense of identity of many territories. It is a heritage with which we can still identify, preserve its buildings and archival and photographic sources, and share its memories. It is also a common European heritage, with the transfer of technology and processes scarcely recognising national boundaries.

7. Across Europe, there are innumerable examples of such transfers of expertise, engineers and indeed of migration of labour. Thus lacemaking in Calais may reflect its English roots, car manufacture in London its Parisian influences, a textile mill in Schio its Belgian model while a colliery in Serbia has an Austrian steam engine and the gasworks in Athens were built by French engineers. The migration of labour is not a modern phenomenon – Huguenots from France established the English silk industry three centuries ago while British iron workers skilled the early 19th century iron industries in France and Belgium and British "navvies" constructed several of the early railways in Europe. More recently, Polish, Italian and Turkish immigrants worked the coal mines in Nord Pas-de-Calais and Limburg, all bringing distinctive cultures to their new workplaces.

8. The understanding and appreciation of this heritage and its most significant sites must therefore be passed on to future generations. What exactly to keep of the Great Age of Industry – machinery, buildings and landscapes – and how to sustain what is kept, is the dilemma for Europe. This report discusses the dilemma confronting many countries faced with obsolete, but historic, industrial sites, with special reference to countries in central and eastern Europe. It shall look, *inter alia,* at the transfer of best practice from western Europe, where there has been 50 years of experience of managing historic industrial sites, to countries where these problems are more recent.

3. Definition and scope of the industrial heritage

9. Although Europe's industrial heritage is the cumulative product of industrial intervention on the environment and its inhabitants for over two millennia, as witnessed by the Neolithic flint mines in eastern England and the Roman flour-milling complex at Fontviellle, it was the change in scale of production over the last two centuries that led to a largely industrialised society throughout much of the continent. Therefore this report focusses on this latter period (19th and 20th centuries).

10. To nuance this statement, it is necessary to underline that many industrial sites of antiquity and the medieval period, such as the mercury mines of Almaden and Idrija and the silver and lead mines of the Erzeberge on the Saxony/Czech border and Lavion in Greece, operated into the modern period. However, such sites are generally well recognised and valued since many of them are included on the World Heritage List or on national "Tentative Lists", like the major industrial sites of the 17th and 18th centuries.[5]

11. Industrial heritage encompasses the extraction, production and processing of all types of raw materials (mineral and organic), the working, manufacturing and marketing of those products and the supporting infrastructure, settlement, utilities, transport and communications. Industrial housing is the most prolific surviving evidence of the industrial era, but the least understood, the least researched and perhaps the most vulnerable. Machinery is an essential part of the industrial heritage and, though more difficult to deal with, its study and preservation deserves the same attention as the buildings it occupies.

12. The industrial heritage is constantly changing. Many of the industries that expanded greatly after 1800 contracted enormously in the second half of the 20th century and their environmental legacy is extremely vulnerable and fragile. The staple industries of the Great Age of Industry – coal, iron and steel, textiles and heavy engineering – have largely disappeared in many countries to be replaced by 20th century creations such as the car, aircraft and electronic industries, the service and leisure industries and the food and beverage industry. These latter industries have also undergone great changes and are equally part of Europe's industrial heritage. These changes in technology, processes and organisational patterns are equally part of the industrial heritage and a particular challenge for the industrial heritage is to keep evidence of these changes over different periods.

5. For example: the silk mills of Italy and the Ardèche, the early cotton mills in Britain and Germany, State enterprises such as the tobacco factories in Italy, Spain, Austria and France and the naval dockyards, salt-works and early ironworks in Sweden, Russia, Britain and France.

4. The current state of industrial heritage in Europe

13. The significance of the industrial heritage was first officially recognised by governments from the late 1950s onwards and, for example, in the United Kingdom in the succeeding half century thousands of sites were statutorily protected, many hundreds preserved and made accessible to the public and many more converted sympathetically to other uses. During the 1970s and 1980s, northern European countries – and especially Germany, France, Sweden, Belgium and the Netherlands – have expanded that vision by ambitiously preserving vast sites. In recent years, the successful and continuing expansion of initiatives, such as the European Route of Industrial Heritage (ERIH) has demonstrated the potency of the message.

14. The situation was to be very different in the former communist countries, where a legacy of obsolescent industries had to be addressed. In the former German Democratic Republic, for example, where lignite had become a prime source of energy, its open cast mining in Lower Lusatia had transformed and devastated the landscape. With German unification that very devastation is now being turned to advantage. The IBA Furst-Puckler-Land initiative is strengthening the identity of the region by creating a chain of water parks and reusing the huge redundant industrial structures, such as the overburden conveyor bridge F60 and the bio-towers in Lauchhammer, as cultural monuments.

15. In Poland there has been much industrial heritage activity with the preservation of several mines and ironworks, while the vast textile mills in Lodz have been converted into shopping malls and hotels. However, the Upper Silesian region of Poland has posed more severe problems of rehabilitation. The region experienced intensive industrialisation during the communist era, but many of those industries were unable to compete in the post-1990 open market and the legacy of contaminated old industrial sites will have to co-exist with new centres of future-orientated industries for some time to come.

16. In the Czech Republic there have been ambitious attempts to preserve significant sites such as the steam-powered sewage works in Prague and the coal mines and ironworks at Kladna and Ostrava and the latter is a European Route of Industrial Heritage (ERIH) Anchor Point,[6] while in Russia iron and steelworks dating from the 18th, 19th and 20th centuries are being preserved in the Urals. In other former communist countries, many sites of industrial heritage still remain to be appreciated and protected. However, there are also very positive examples of transfer of experience in Lithuania, Latvia, Estonia and Finland that have benefited from close international collaboration with Denmark, Norway and Sweden.

17. There is no comprehensive overview of the state of the industrial heritage across Europe, though some indication of current development is provided in the national reports prepared for the main conferences of the International Committee for the Conservation of the Industrial Heritage (TICCIH) every three years. Detailed analysis of these reports might produce an indicative, albeit patchy, overview. The ERIH website[7] also provides a lot of information about the sites in that network and their European context.

18. However, it is suggested by Europa Nostra's Industrial and Engineering Heritage Committee that a sector-by-sector approach (for example transport heritage, the heritage of the textile industries, the heritage of flour-milling, the iron and steel heritage, the coal-mining heritage, etc.) would better underline the European nature of the industrial heritage and the place of this heritage in the European identity: Europe, "the first industrial continent". The commissioning of such pan-European thematic reports, initially in an overarching summary form, would be a significant advance in the assessment of Europe's industrial heritage.

19. Attempts at compiling comprehensive sophisticated industrial heritage databases for the continent by professionals have so far not met with much success, although the TICCIH is currently developing a digitised system for an international database. Experience in some countries has shown that collaboration between national agency staff and expert enthusiastic volunteers can be of more immediate value, particularly when dealing with thematic surveys.

5. Actors involved in the industrial heritage of Europe

20. Beyond individual States, local and national associations and local or State authorities (ministries of culture), several pan-European organisations are directly or indirectly concerned with the industrial heritage.

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6. For more information: www.dul-michal.cz and www.dolnioblastvitkovice.cz.
7. The ERIH website contains a wealth of information about industrial sites open to the public along with many contextual details of European industrialisation: www.erih.net.

21. The Council of Europe has been involved in industrial heritage for many years, since first recognising the issue in the mid-1980s at its conferences in Grenada, Lyons and Madrid and stressing the need for a global multi-disciplinary view and for strategies for increasing awareness and providing incentives. It published the report of the Bochum Colloquy on "Mining engineering monuments as a cultural heritage" in 1989, held further events in Spain and the United Kingdom in the 1990s and promoted "Our Common Inheritance" campaign in 2000, and its European Heritage Network (HEREIN) encompasses industrial heritage.

22. The European Union has conducted several industrial heritage initiatives including: under its "Raphaël Community action programme for heritage", a project on inter-war airports in Paris, Berlin and Liverpool; under its "Culture 2000" programme, the Working Heritage Project studied regeneration in Roubaix (France), Schio and Terni (Italy), Colonia Guell (Spain) and Birmingham's Jewellery Quarter (United Kingdom); while another project linked three museums in France, Belgium and Italy; and under its "Interreg programes", the pilot European Route of Industrial Heritage.

23. The European Route of Industrial Heritage developed out of an Interreg project of the same name covering a small area in north-west Europe and has now expanded greatly geographically. It currently presents more than 900 sites in 35 countries with 80 Anchor Points, 16 Regional Routes and 13 Theme Routes; though in its current form it is mostly concerned with networks between museum sites, it is increasingly embracing other preserved industrial sites.

24. The International Committee for the Conservation of Industrial Heritage[8] has over the last three decades done much to promote industrial heritage, but is anxious to remain a worldwide organisation without any special focus on Europe. It is the official advisor on industrial heritage to the International Council on Monuments and Sites (ICOMOS) and has produced thematic reports for the World Heritage Convention on canals, railways, bridges, collieries, company towns and agricultural landscapes. It has produced "Joint ICOMOS–TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes" ("The Dublin Principles")[9] and its own "Nizhny Tagil Charter for the Industrial Heritage".[10] Many European countries have a national chapter affiliated to TICCIH and run national conferences and workshops. TICCIH's comprehensive handbook *Industrial Heritage Re-tooled* was published in November 2012. The next Congress – TICCIH 2015 – will be held in Nord-Pas-de-Calais, in France. Since 1965, ICOMOS has produced many charters and guidelines that have relevance to industrial heritage, including those on principles of recording, cultural tourism, and the Burra Charter[11] which, building on the original Venice Charter,[12] sets out a logical sequence of investigations, decisions and actions for conservation initiatives.

25. Europa Nostra[13] has long been involved with industrial heritage. Many European heritage awards (Europa Nostra Awards since 2002) have recognised industrial sites, including most recently the 1920s No. 2 Blast Furnace in Sagunto, Spain. Other commended sites in the past include Antwerp station, the *Vias Verdes* railway pathways, the Rio Tinto Mining District and the Bilbao Transporter Bridge in Spain, Amsterdam's Westergasfabriek, the Millennium Centre in Budapest, Chatham Dockyard and Glasgow Central Railway Station in Scotland, the Louise Briquette Factory Domsdorf in Germany, the Cibali Tobacco and Cigarette Factory in Istanbul and the Old Paper Mill Complex in Konstancin Jeziora in Warsaw. Europa Nostra devoted its 2006 Cultural Heritage Review to industrial heritage as it did its annual congress in Newcastle in 2008. Europa Nostra has a specialised Industrial and Engineering Heritage Committee which advises among other things on above-mentioned awards.

26. In many countries, the lead in the promotion and preservation of the industrial heritage has been taken by volunteer enthusiasts and this must be nurtured as it is a resource of considerable commercial as well as cultural value. State bodies can encourage capacity-building schemes with the outlay of only modest resources and utilise the expertise of bodies such as the Committee on Information and Liaison for the Archeology, Study and Presentation of the Industrial Heritage (Comité d'information et de liaison pour l'archéologie, l'étude et la mise en valeur du patrimoine industriel – CILAC)[14] in France and the Association for Industrial Archaeology

8. The TICCIH website (www.ticcih.org) is a comprehensive source of information on the industrial heritage. It presents its Nizhny Tagil Charter for the Industrial Heritage and its quarterly Bulletins from 2004 onwards – these contain a great deal of information on industrial heritage case studies and publications.
9. Joint ICOMOS-TICCIH document, adopted on 28 November 2011. For more information: www.icomos.org/Paris2011/GA2011_ICOMOS_TICCIH_joint_principles_EN_FR_final_20120110.pdf.
10. TICCIH document adopted in July 2003. For more information: www.mnactec.cat/ticcih/pdf/NTagilCharter.pdf.
11. See: http://australia.icomos.org/publications/charters/.
12. See: www.international.icomos.org/charters/venice_e.pdf.
13. The Europa Nostra website gives details of its awards and publications: www.europanostra.org.

(AIA)[15] in the United Kingdom. The European Federation of Associations of Industrial and Technical Heritage (E-FAITH),[16] an organisation run by volunteers, seeks to facilitate co-operation between voluntary associations across Europe and campaigns for endangered sites. It holds annual weekend workshops and has produced a Memorandum stressing the cultural significance of the industrial heritage as part of its campaign calling for a European Industrial and Technical Heritage Year in 2015.

6. Appreciation of industrial heritage across Europe

27. Support from the Council of Europe, awards from Europa Nostra and funding from national and the European Union programmes have greatly encouraged voluntary and non-governmental organisations' (NGOs) efforts and the cumulative result of all this interest has been the creation of a considerable library of publications dealing with all ramifications of industrial heritage, hundreds of associations devoted to championing of various aspects of the subject, tens of thousands of sites in western Europe being designated as protected sites and many thousands more preserved or converted to other uses. Most importantly, it has led in some countries to a general appreciation at a popular level of the value of national industrial heritage.

28. However, public perception and opinion must still be constantly nurtured and moulded. As early as 1985, the Council of Europe Lyons conference urged a Europe-wide campaign for education about industrial heritage and therefore educational curricula at all levels should contain material outlining the significance of industry in shaping European society throughout the modern period. In many countries, a considerable number of conservation successes have been achieved by the publication of lavishly illustrated books extolling the appreciation of industrial sites. These have increased public awareness of industrial heritage issues and have thus influenced local politicians and planning authorities. Films often have a major role to play as evidence of a lost way of life from an industrialised era – national film archives contain a wealth of such evidence which is only now being appreciated. Similarly, photographic archives, aided by computer-aided retrieval and online access, are making such material available to the general public. Television has also been very instrumental in informing and inspiring the public from the 1960s onwards: programmes celebrating the achievements of famous engineers and chronicling the way of life of industrialised society have caught the public imagination.

29. These industrial heritage programmes are constantly being rebroadcast on digital channels and most new historical and archaeological series now routinely include industrial sites and events. These events can be entertaining as well as inspirational – the European Industrial Heritage Nights are a case in point, while the regeneration of industrial sites can embrace wider cultural and leisure activities which introduce a different audience to industrial heritage, as demonstrated by Emscher Park in the Ruhr and C Mine in Limburg. All these various media must be employed to mould favourable public perception and broadcast the message of Europe's shared industrial inheritance, while the creative industries must be encouraged and supported to convey that message by innovative tools such as apps and GPS tourist information guides.

7. Recognition, protection and preservation of industrial heritage

30. The industrial heritage is highly vulnerable and often at risk, most often lost for lack of awareness, documentation, recognition or protection but also because of changing economic trends, negative perceptions, difficult environmental issues or as a result of its overwhelming size and complexity. The informed management, conservation, interpretation and enjoyment of the sites and their cultural appreciation are therefore the primary aims of conserving industrial heritage and this may involve differing levels of protection ranging from local lists and conservation areas through statutory designated individual sites at varying grades up to World Heritage Sites and landscapes. Each country will have its own designation codes and these vary widely from country to country. Some countries such as Germany and the United Kingdom have developed and refined statutory designation over more than a century, giving very generalised protection cover to tens of thousands of industrial heritage sites. Others such as France focus on fewer, more fully documented, sites. Countries in central and eastern Europe, such as Croatia and Bosnia and Herzegovina, may only be at an embryonic stage.

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14. The CILAC website gives details of the numerous events and publications, including the twice yearly l'Archéologie Industrielle en France, which since 1979 has chronicled the path of industrial heritage in France: www.cilac.com.

15. The AIA was founded in 1973 and its website is a portal to its publication Industrial Archaeology Review and its quarterly bulletin IA News: www.Industrialarchaeolgy.org.

16. The E-FAITH website gives details of current events and campaigns across numerous affiliated organisations: www.e-faith.org.

31. The Council of Europe's European Heritage Network (HEREIN) presents summaries of these national heritage policies. Legal protection is usually the end result of an assessment of significance and it is therefore the veracity of the processes of identification and assessment that are crucial to the effectiveness of the protection and these can change greatly over time and especially so with industrial sites. Thus a site that may have been common a few decades ago may have now achieved great significance as a rare survivor. It follows that ideally all assessments should be regularly reviewed and updated if necessary. It can be argued that the assessment of the significance of a site can also be influenced by locational factors: whether it is in the central/north, the Mediterranean or the east – the three European macro regions with a similar state of art –; whether urban or rural; the relative size of the site; whether it dominates a small town or is absorbed in the urban tissue of a metropolis.

32. A common strand throughout the process in many countries has been an alliance between volunteer expert knowledge and the official use of that knowledge. This too has constantly evolved over a period of fifty years. Today much expertise resides in official bodies and much use is made of paid consultants, but some of the best work is still achieved through the use of expert volunteers.

33. The lessons that can be learnt from experience in countries that have highly developed designation include:

– The value of volunteer expertise: for every subject there are likely to be single-minded enthusiasts and their knowledge and passion should be harnessed to good effect. English Heritage works closely with the Association for Industrial Archaeology and the Council for British Archaeology (CBA) to maintain a vision for the stewardship of the industrial heritage while in France, CILAC has a close relationship with the Ministry of Culture.

– The use of advisory panels composed of experts and representatives of official agencies gives a degree of transparency to the consideration of sites for protection.

– Assessments of significance must be kept up to date as they can change greatly over time.

– Good contextual frameworks allow prioritisation of scarce resources.

– All sites of interest should be entered in official planning databases or their equivalent, both by private individuals as well as official agencies. This allows a constructive dialogue between property developers and conservationists.

– The compilation of comprehensive overviews of historic resources permits selection of outstanding sites whether for protection at the highest levels or for nomination for World Heritage status.

– Public opinion is very important, especially so in issues of protection and preservation, and must be carefully cultivated. In western European countries, where there is a long tradition of public exposure to industrial heritage, this may seem rather obvious but it may be quite unfamiliar in many other countries, where it will require sustained programmes of education and media attention to raise public awareness of the contribution that industry has made to European and thus their own culture. Public vigilance, generated by appreciation, is a necessary first line of defence against vandalism and other threats to empty and disused historic industrial buildings, but it is equally important to persuade owners to avail themselves of the considerable body of guidance on reducing such risks.[17]

34. The European industrial heritage resource can be viewed as a pyramid with at its base hundreds of thousands of un-assessed and therefore unprotected industrial sites, rising through tens of thousands of identified and designated sites, and with a few thousand preserved sites as World Heritage sites at its pinnacle. Though UNESCO recognises that industrial heritage is generally under-represented in the World Heritage List, appropriately, Europe, in view of its role in global industrialisation, dominates the current List in terms of industrial sites. Thus, out of the 46 such sites in 2012, 36 are in Europe. The United Kingdom has eight, the Netherlands and Belgium four each, Germany, France, Sweden and Italy three each, Switzerland two and Austria, Finland, Norway, Poland, Portugal and Slovenia one each. In addition, there are 18 more industrial sites included in the Tentative Lists for various European countries. An analysis of all the sites shows that they are dominated by the transport, mining and primary production industries, with the manufacturing industries less well represented.

17. See the English Heritage website where PDFs can be downloaded on "Vacant Historic Buildings; An owner's guide to temporary uses, maintenance and mothballing", English Heritage, 2011, and "Arson Risk: Preserving life and Lancashire's Industrial Heritage", English Heritage with Lancashire Fire and Rescue service, 2011: www.english-heritage.org.uk.

35. World Heritage sites must be of outstanding universal value and, this being the supreme accolade, inscriptions must be limited. Therefore, there may be a special case for having a slightly lower standard for industrial heritage sites that are of clearly European, if not world, significance. There are already some industrial sites included in the forthcoming European Label sites – the Industrial city of Tomas Bat'a in Zlin, Hlubina coal mines and steel blast furnaces in Vitkovice in Ostrava in the Czech Republic, Kremnica Mint in the Slovak Republic, and the Gdansk Shipyards in Poland. However, these sites, by definition, should have specific relevance to the emergence of the European political identity, a condition that may be rather restrictive for most industrial sites and it may be appropriate to look elsewhere for a model. The Japanese recognise Heritage Constellations of Industrial Modernisation which are thematic clusters of historic sites of special significance and the idea might be translated to a European context. Thus lignite sites in Saxony, textile mills in the Sedan area, collieries in Limburg, hydro-electric generating stations in Norway, textile colonia in Catalonia, metal-working sites in the Rhur and in Sheffield, blast furnaces in Sweden, the Urals and in Cumbria, jewellery and furniture workshops in Birmingham and Paris and colliery railways in north-east England, might be the type of sites that would benefit from pan-European recognition.

8. Conserving the industrial heritage by its conversion to new sustainable uses

36. Recognition and protection are not the only elements for the sustainable preservation of industrial heritage: community sentiment, community skills and community involvement are crucial drivers to preserve the past and give impetus for future regeneration projects. Industrial sites are more than just bricks and mortar; they embody all manner of local testimonies and identity and are part of a social landscape and intangible heritage. In any regeneration we should preserve this sense of place (*genius loc*i), respect the memories of ancestors who built it, excite the imagination of children who are passing through it and strengthen the sense of belonging of the people who inhabit it. True sustainability will embrace these qualities and utilise them to good effect.

37. Industrial heritage – by its scale and its impact on surrounding landscapes – can play a pivotal role for territorial regeneration. The rehabilitation of industrial heritage will depend on many factors, ranging from its heritage value, its scale and location in the surrounding environment (urban, sub-urban or rural setting), its conversion potential to new uses identified through local development strategies or its potential to integrate in a cluster of related industrial activity or industrial heritage. The success of such projects will also depend on interaction with other cultural resources and cultural heritage that are available locally, but also regionally and internationally (through cultural walks, cultural routes and networks, heritage day events, theme activities, etc.).

38. If industrial heritage is to be the catalyst for territorial regeneration, we have to capture the testimonies that created it. A starting point in a successful regeneration project will therefore be preliminary meetings with the local communities to ascertain their views and wishes and accommodating these in the project. For example, in Roubaix, community groups led the way in the conversion of the Conditioning House and the Princes Regeneration Trust in the United Kingdom has had great success in assisting community partnerships in developing project proposals to convert historic industrial sites and has produced a “toolkit” for such projects.[18]

39. The physical sustainable reuse of industrial buildings and sites is somewhat simpler and nothing new – industrial buildings can often offer cheap, easily utilised space. However, the considered reuse of industrial buildings respecting the character and the integrity of the buildings is a feature of only the last four decades while respecting the character of the community is even more recent. There is now a considerable body of literature discussing the economic issues, encouraging investment, giving guidance on good practice and highlighting good examples. Good practice examples of physical conversions range from spectacular conversions such as the Albert Dock and the Gothenburg waterfront, the Ruhrgebiet, Saltaire, Dean Clough and Manningham Mills in Yorkshire, Carl Zeiss factories in Jena and the Lingotto Car Factory, developments such as the GWR Swindon Engineering Workshops, the steel works at Terni and Naples, gasholders in Vienna and Dresden, and a multitude of much more modest conversions of ordinary industrial buildings. More recently, we have exemplars of economic and employment strategies like the textile mills of Augsburg and the more community-orientated projects of the Monfalcone Shipyards and the Arsenale in Venice.

40. Conservation-led regeneration in historic industrial districts such as the Amsterdam Canal Ring, the Ile de Nantes and Birmingham’s Jewellery Quarter and of the mills of Lodz, Ancoats, Roubaix and Schio has shown the commercial value of such developments, but recent research has shown that there is much

18. The sustainability toolkit can be downloaded from the PRT website: www.princes-regeneration.org.

advocacy work still required to encourage developers to take on industrial sites. A catalogue of good practice and case studies drawn from a wide range of countries, including from central and eastern Europe, would provide good guidance.

41. The reuse of industrial buildings is now being seen as ecologically sound because of the potential energy sources in buildings (building structure, materials, etc.) and the industrial heritage can therefore be considered as a non-renewable resource. There are, however, huge issues of contamination remediation to be undertaken in a number of industrial sites. Many solutions are very damaging to the integrity of the industrial heritage resource concerned. European Union water purity directives, for example, though essential, can have serious implications for upland mining remains. "Industrial Heritage – Ecology & Economy" was the theme of the XIV TICCIH Congress held in 2009 in Freiburg (Germany) and some of the published papers of the congress discuss the problems facing post-industrial landscapes and the conflicting priorities posed by European Union directives and the sustainable preservation of monuments.[19]

9. Financing industrial heritage projects

42. Many industrial heritage projects can never be financially self-sufficient and will require some measure of external support. There are in existence many and varied sources of finance for industrial heritage projects whether inventory and research programmes or restoration projects. European agencies have supported several projects of all types while local authorities, State bodies and universities have supported others. The preservation sector – museums and sites – usually need a large degree of funding for capital projects and this can be met by a variety of sources. For instance, in the United Kingdom, the Heritage Lottery Fund, part of the National Lottery, has over the last fifteen years been by far the largest sponsor of industrial heritage projects, having spent a billion euros on over 2 000 projects with national agencies providing some 25 million more.

43. However, private finance has been the main source of funding in the conversion of most industrial premises throughout Europe, often in partnership with local authorities or State bodies to make up any conservation deficit. Recent research has shown that developers are still wary of tackling industrial sites and constant encouragement and incentives are still required. In the granting of planning permission, there should be provision for investment in a preliminary investigation in order fully to understand the building to be reused, so as not to lose historical values and for subsequent investment to help interpretation *in situ*. Some national agencies publish annual lists of buildings at risk and provide special advice and support for the restoration of particularly difficult buildings, many of which are industrial.

10. Conclusions

44. "The industrial landscape is a misunderstood heritage, at worst urban rustbelt, dangerous, a toxic wilderness; at best, an outstanding historical resource to be re-used, regenerating communities, offering real richness and opportunity, reinforcing cultural identity and creating new commercial prospects. But it can also be a vivid reminder of how today's world came to be the way it is, when industry employed whole communities and provided the heartbeat for many towns and cities. In this respect these historic industrial landscapes deserve our closest attention" (Sir Neil Cossons, in "Why save the industrial heritage?", publication *Industrial Heritage Re-Tooled*, TICCIH 2012).

45. Across Europe, the industrial heritage is highly vulnerable and often at risk, most often lost for lack of awareness, documentation, recognition or protection, but also because of changing economic trends, negative perceptions, difficult environmental issues or as a result of its overwhelming size and complexity. It is therefore vital for politicians at local, regional and national level to fully understand and use the potential of industrial heritage, which can become a key element for territorial regeneration.

46. In the context of a wider territorial and socio-economic regeneration, the effective rehabilitation of industrial heritage will depend on many factors, ranging from its heritage value, its scale and location in the surrounding environment, its conversion potential to new uses, and its potential to integrate in a cluster of related industrial activity or industrial heritage. The success of such projects will also depend on interaction with other cultural resources and cultural heritage sites that are available locally, but also regionally and internationally, for example through cultural walks, cultural routes and networks, Heritage Day events, theme activities, etc.

19. Selected papers of the XIV TICCIH Congress 2009, edited by Albrecht, Kierdorf and Tempel, were published in English and German editions in 2011 by the Sachsishes Industriemuseum, IWTG/TU Bergakadamie, Freiburg.

47. The good examples of such projects that the rapporteur draws on from the hearing which was organised by the Sub-Committee on Culture, Diversity and Heritage in Maribor (September 2012) demonstrate that the best way of preserving the industrial heritage lies not so much in statutory protection, despite its obvious importance, but in the way communities recognise and appreciate their industrial heritage, through study, understanding and the sharing of knowledge. A sense of community ownership is vital.

48. The draft resolution includes a number of issues that I believe should be considered to ensure that the legacy of Europe's Age of Industry is safeguarded for future generations. Among them, I would insist in particular on the following elements.

49. We need to encourage study and research at regional, national and European levels, to provide an overview of Europe's industrial heritage resource, country by country and/or thematically. In particular, the preparation of pan-European thematic reports, initially in an overarching summary form, would be a significant advance in the assessment of Europe's industrial heritage and would also contribute to a deeper understanding of the value of such a common inheritance.

50. The existing legislation on the protection of historic sites is not necessarily adequate for industrial sites and should not be applied mechanically. More flexibility seems to be required and it might be sound to consider the introduction of a recognition category of European Industrial Heritage Site and/or identify "Constellations of Europe's Great Age of Industry".

51. Stronger co-operation between key stakeholders should be sought. UNESCO, the European Union and the Council of Europe should join forces and seek collaboration with major international non-governmental organisations active in the domain of industrial heritage. Such collaboration should be designed, in particular, to network, share and translate good practice from countries with successful sustainable case study examples to sites in countries with lack of experience of such projects, and to strengthen the public awareness of the European Industrial Heritage, *inter alia* by creating a comprehensive and representative list of European industrial monuments.

52. Within this framework, support could be provided to the E-FAITH campaign for a European Industrial and Technical Heritage Year in 2015.[20] 2015 would be 25 years on from Council of Europe's Committee of Ministers recommendation to promote awareness and appreciation of industrial heritage and declaration of such a year could be equally a celebration of 25 years of achievements and a present concern for the sustainable future of Europe's industrial heritage. This date would be particularly appropriate as the TICCIH Conference will be held in France in 2015. It could also be envisaged to adopt industrial heritage as the theme for a Heritage At Risk Year, to emulate the success of the 2011 initiative in England which drew together the many strands involved in regeneration and led to new supportive initiatives.[21]

53. At all levels, there is a need to reinforce partnerships with private and non-governmental organisations and seek interaction with cultural resources and cultural heritage that are available locally, regionally and internationally (for example through cultural walks, cultural routes and networks, European Heritage Day events, theme activities, etc.). The provision of resources through private/public partnerships could help overcome the conservation deficit that the rehabilitation of industrial sites can often pose.

54. Member States should nurture the volunteer enthusiast resource by providing capacity-building initiatives. They should encourage the establishment of a network of multidisciplinary task forces bringing together expertise in relevant domains such as building history, monument protection, urban planning, financial strategies, investment and partnerships. These national task forces would provide a valuable service to facilitate sustainable regeneration processes, using industrial heritage sites as key elements. They should also be encouraged to initiate projects to study how best to utilise energy embodied in industrial buildings and to reconcile ecological measures such as water purity directives with the preservation of historic industrial remains.

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