



Promoting
Climate Action
and Sustainability
in World Heritage
Education







"Young Climate Action for World Heritage" is a transnational educational project for young people dealing with World Heritage, climate change and Education for Sustainable Development, implemented by the Institute Heritage Studies in cooperation with the German Commission for UNESCO.

# Institute Heritage Studies (IHS) at the Internationale Akademie Berlin gGmbH

The IHS is dedicated to the investigation and sustainable implementation of the heritage of humanity. As a research and science centre, it explores the diverse constructions of heritage, advocating for a comprehensive understanding of heritage and communicating this knowledge holistically. The IHS "Heritage Studies" series is a collection of scientific publications featuring diverse heritage topics and expert perspectives from around the world. As a driver and enabler of sustainable heritage protection, the IHS implements education at heritage sites through transcultural model projects and works to ensure that heritage, in its various facets and identity-building functions, is embedded in school curricula.

The Institute Heritage Studies is part of the Internationale Akademie Berlin gGmbH (International Academy Berlin, INA). INA's primary focus is fostering interdisciplinary cooperation in education, research and practice development, drawing on scientific findings to address social problems and contribute to changes in education systems, from kindergarten to university.

# More information: www.heritagestudies.eu/en

"Heritage Studies" series: https://heritagestudies.eu/en/ category/publications/books/ heritage-studies-series

#### German Commission for UNESCO and the UNESCO Associated Schools Network (ASPnet)

The German Commission for UNESCO works at the intersection of foreign cultural and educational policy and acts as a link between UNESCO, the government and civil society in Germany. The promotion of high-quality, inclusive and equitable education in line with the UN 2030 Agenda for Sustainable Development is a central focus of its work.

The National Coordination of ASPnet in Germany is part of the German Commission for UNESCO. ASPnet pioneers innovative and creative pedagogies to translate global concepts into practices at the school level and transform education systems and policies. As a global network, it fosters international cooperation, knowledge sharing and partnerships. Thanks to collaboration within ASPnet and between different National Commissions for UNESCO, ASPnet schools from five European countries took part in Young Climate Action for World Heritage.

The German Commission for UNESCO also plays a central role in the implementation of the World Heritage Convention in Germany and promotes networking between national and international World Heritage stakeholders. Its World Heritage Division prepares information, provides advice, conveys expertise and supports national and international cooperation and networking. Its main areas of expertise include networking, information and communication, World Heritage education and sustainable development.

More information: www.unesco.de/en www.unesco.org/en/aspnet







#### **Transnational Project Cooperation**

"Young Climate Action for World Heritage" exemplifies a transnational approach by connecting World Heritage Sites and schools from the UNESCO Associated Schools Network and beyond in Germany, the Czech Republic, Denmark, the Netherlands and Poland. This cross-border collaboration reflects the need to address the climate crisis through collective action across national boundaries. It also resonates with the founding principle of the World Heritage concept, which emphasizes international cooperation and solidarity in the protection of the heritage of humanity.

## Acknowledgement of Sponsors and Project Partners

"Young Climate Action for World Heritage" was funded by the German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt, DBU). The DBU is one of the few foundations focusing on heritage protection and preservation in the face of climate change. In this context the DBU provided financial support and expert guidance and actively promoted the importance of educating young people about the impacts of climate change on World Heritage.

The World Heritage Sites were highly motivated to participate in the project as funding institutions and project partners as they face the effects of climate change in their daily work. The project provided an opportunity to engage students and teachers from the **UNESCO** Associated Schools Network and beyond, who are an important target group for the World Heritage Sites' mission to educate civil society. The involvement of the World Heritage Sites was essential for integrating local expertise into the project.

We extend our gratitude to all funding institutions and partners for their commitment and dedication, including the participating schools. Special thanks go to the stakeholders involved at the World Heritage Sites and the teachers, students and principals from the schools involved, whose knowledge, creativity and outstanding personal dedication ensured the success of the project.





















The project's closing conference in the form of a "Youth Summit" was funded by:





# **Table of Contents**

8	Greeting	<b>Statement</b>	S
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- 13 About the Publication
- 14 Introduction

# Young Climate Action for World Heritage

- 17 1. World Heritage and Climate Change:
  Threats and Potentials
- 20 2. Project Community
- 32 3. The Pedagogical
  Approach: Connecting
  Education for Sustainable
  Development and World
  Heritage Education
- 34 4. Turning Approaches into Practice: Project Implementation
- 38 5. Project Highlights: Students Get Active for World Heritage and Climate Protection

# Results, Benefits and Guidance

- 47 1. Results
- 49 2. Benefits
- 50 3. Guidance

# **Toolkit for Exploring World Heritage**

- 55 Introduction
- 56 1. Preparation: Get Familiar with World Heritage
- 58 2. Time Capsule
  Laboratory: Impulses
  for On-Site Exploration
- 60 3. Impulses for Reflection
- 62 4. Ten Steps to Develop Your Own World Heritage Project: Transferring Experience Into Action
- **64 Glossary**
- 65 Literature
- 66 Imprint

# **Greeting Statements**



Lazare Eloundou Assomo Director UNESCO World Heritage Centre

The sites inscribed on UNESCO's World Heritage List are protected under the World Heritage Convention, established in 1972. Thanks to this unique intergovernmental convention, UNESCO can bring together the world's nations and people to harness conservation and sustainable development of humanity's most exceptional cultural and natural heritage.

As of today, the World Heritage List includes 1223 sites that are considered to have Outstanding Universal Value (OUV) for humanity. However, one in three of the natural sites and one in six of the cultural heritage sites are currently threatened by the various impacts of climate change.

As World Heritage sites belong to all the peoples of the world, irrespective of the territory on which they are located, it is our collective responsibility to preserve these sites for future generations and to take immediate climate action measures.

In this regard, the "Policy Document on Climate Action for World Heritage," endorsed by the General Assembly of the World Heritage Convention in 2023, aims to protect World Heritage properties while encouraging adaptation and mitigation actions and fostering inclusive sustainable development. It further encourages the states parties to develop educational activities in relation to the risks and responses related to climate change impacts on World Heritage properties.

Likewise, the 1972 World Heritage Convention highlights the importance of youth and the need for educational and awareness-raising programmes to strengthen appreciation and respect for the world's cultural and natural heritage.

UNESCO launched the World Heritage Education Programme as a flagship programme for young people. Through a diverse range of activities and projects, the programme develops formal and non-formal tools to provide tomorrow's decision-makers with the knowledge and skills to get involved in heritage protection and preservation. It also gives young people a chance to voice their concerns and respond to the continuing threats facing our common World Heritage.

The involvement of youth as agents of change and the future stewards of our heritage is crucial for the successful implementation of the World Heritage Convention.

Therefore, I welcome the learner-centred and innovative approach of "Young Climate Action for World Heritage" in harnessing World Heritage sites as learning spaces for sustainable development and climate action, building meaningful partnerships between schools, sites and local communities.

I would like to congratulate the participating youth, schools, stakeholders and World Heritage sites for their joint efforts and dedication to work and learn together, address this pressing issue, and explore solutions for a sustainable future of our World Heritage. I am sure this guide will inspire educators and practitioners to undertake similar approaches to empowering youth to protect and promote World Heritage in times of climate change.



**Prof. Dr. Marie-Theres Albert**Director
Institute Heritage Studies

More than 50 years after the ratification of the World Heritage Convention, the heritage of humanity remains one of the most important achievements of the global community. However, all over the world, people and their heritage are increasingly threatened by crises such as climate change, war, commodification and unsustainable development. Today, more than ever, the global community has a responsibility to protect its heritage in a sustainable way.

This responsibility involves broadening the target groups for heritage protection. Those in the current generation need to mobilize their peers and future generations to take responsibility and care for their heritage. They must learn to understand heritage's potential to shape society in general, build identity and, ultimately, foster peace in the world.

With this message in mind, we initiated the "Young Climate Action for World Heritage" project, the first project of its kind to target young people in an international context, connecting them with each other and with their World Heritage. Young people are the ones who can lead the way forward by sustainably implementing the objectives, contents and values of the World Heritage Convention.

"Young Climate Action for World Heritage" was a practical educational programme based on the theoretical approach of the IHS concept of Heritage Studies. It innovatively developed and implemented strategies to motivate the next generation to take responsibility for sustainable heritage protection. The project is well suited for the development of follow-up projects that can promote a holistic understanding of our World Heritage, with young people as the main actors.

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**Prof. Dr. Maria Böhmer**President
German Commission for UNESCO

Walking barefoot together on the mudflats of the Wadden Sea, discovering the old oak trees in Park Babelsberg, exchanging views on architecture, lifestyles and educational ideas in Herrnhut – three impressions from three different workshops of "Young Climate Action for World Heritage": This publication offers many more impressions of the international educational project, which the Institute Heritage Studies and the German Commission for UNESCO jointly carried out from 2022 to 2024. The project was funded by the German Federal Environmental Foundation.

As President of the German Commission for UNESCO, I would like to thank our two main partners as well as all other important supporters at the World Heritage Sites and schools for their trusting cooperation. I would also like to take this opportunity to thank the National Coordinators of the UNESCO Associated Schools Network and the National Commissions for UNESCO of the Czech Republic, Denmark, the Netherlands, and Poland. Most importantly, I would like to thank the teachers and students who were eager to learn more about climate change and its impact on our cultural and natural heritage, which can only be protected once known and felt.

This publication offers insights into the pedagogical approach and show-cases the wide range of ideas that young people used to campaign for World Heritage and climate protection, following on-site workshops at six different World Heritage Sites: from art exhibitions, to the design of various games and exploration tours, to their own video clips and podcasts. With all of this, the international network of UNESCO Associated Schools has once again shown its creativity and capacity to connect schools and students across borders. I hope that there will be many follow-up projects in the spirit of "Young Climate Action for World Heritage" to empower future generations for the sustainable development and protection of our common global heritage.



Constanze Fuhrmann Head of Unit Environment and Cultural Heritage Protection German Federal Environmental Foundation (DBU)

The project "Young Climate Action for World Heritage," funded by the German Federal Environmental Foundation (DBU), creatively addressed the challenges of global climate change. The project focused on two of our foundation's main concerns: promoting sustainable education for the future and preserving cultural heritage.

Heritage sites are valuable places of learning that offer fascinating insights into the past and bring historical events to life. They provide ideal settings for climate education, where the impact of the climate crisis on heritage and the planet can be communicated. World Heritage Sites, such as Rammelsberg in the Harz Mountains, are also connected to important sustainability issues. Here, historical mining activities have left lasting marks on the ecosystem, much like how climate change is affecting our forests today. It is our duty to share these stories at World Heritage Sites.

It is also our responsibility to promote sustainable education while protecting cultural heritage, which is a key aspect of this project. Proactive action is essential to ensure that our heritage is preserved for future generations. This requires continuous education to raise awareness about the sustainable use of our heritage and foster environmental consciousness.

For this reason, the DBU supports projects like this one. As a funding foundation, we have a special role to play, as cultural heritage is often not given sufficient consideration in educational strategies. The climate crisis, natural disasters and the loss of biodiversity are some of the biggest challenges facing World Heritage, both in Germany and worldwide. We need more climate action and committed individuals like those involved in this project.

We sincerely thank the grant recipient and everyone who contributed to the project. Their tireless work and commitment are invaluable. They have raised awareness of the challenges posed by climate change and demonstrated innovative ways to combine education and cultural heritage.



# **About the Publication**

# What is the aim and content of the publication?

The aim of the publication is to share the results of "Young Climate Action for World Heritage" beyond the project community in a way that supports (World) Heritage experts and educators to promote and encourage climate action and sustainability in heritage education. Based on the experiences and lessons learned, we want to:

- Part 1: introduce the thematic and pedagogical approach and the project community, describe the practical project implementation and present project highlights
- Part 2: present the project results and benefits and provide guidance on World Heritage and education in times of climate change
- Part 3: share pedagogical impulses by providing a practical toolkit to explore World Heritage Sites

As the project's key actors, the students themselves are given a voice in this publication. Student quotes collected during the workshops are included throughout, providing first-hand insights into their perspectives and experiences.

For reference, key terms are summarized in the glossary (see pages 62–63). Terms included in the glossary will be highlighted by a • 7 upon their first mention in the text.

# Who is this publication for?

The publication is intended for all people motivated to learn and educate others about UNESCO World Heritage in an activating, sustainable and holistic way. It addresses young people interested in the topic as well as professionals. The publication is transdisciplinary and transcultural and touches on cultural and natural heritage, World Heritage and climate change as well as heritage-related, sustainable and intercultural education. It is relevant for experts working at cultural, natural and World Heritage Sites, as well as teachers and educators in schools, cultural and educational institutions, museums and visitor centres. The content should also resonate with local stakeholders in cultural and heritage education, such as associations, youth centres and municipalities. After all, World Heritage education thrives through collaboration, making it meaningful and impactful for all involved. Heritage institutions involve young people, while schools connect with local heritage sites. Moreover, local and regional actors bring valuable experience into the learning environment, strengthening ties among all partners in the region.

For more information about "Young Climate Action for World Heritage", check out the project website and the German project publication: www.heritagestudies.eu/youngclimateaction/en

# Introduction





UNESCO World Heritage Sites • ¬ are cultural and natural heritage sites that are recognized to be of "Outstanding Universal Value" • ¬ to all humanity. According to the World Heritage Convention • ¬ (UNESCO 1972), they must be safeguarded for present and future generations by the international community. For example, the Wadden Sea—the world's largest unbroken area of sand and mud flats extending from the Netherlands over Germany to Denmark, or the Archaeological Border Complex of Hedeby and the Danevirke—an outstanding testament to trade and exchange in the Viking Age are just two of over 1,200 World Heritage Sites protected under UNESCO's World Heritage Convention. Despite their protection, these World Heritage Sites are at risk from the triple man-made crisis of climate change, biodiversity loss and pollution.

If global warming continues unchecked, the already severe effects on World Heritage Sites, such as the Wadden Sea or Hedeby and the Danevirke, will be exacerbated. The effects of climate change range from increased extreme weather events and rising sea levels to prolonged drought. They pose manifold challenges to the protection of the outstanding values of many World Heritage Sites.

But how can the global community sustainably protect World Heritage Sites now and in the future? One essential step is mobilizing current and future generations of civil society to assume responsibility for the heritage of humanity and, thus, for their own heritage. That is exactly where "Young Climate Action for World Heritage" comes in. Young People, despite their concern about climate change and their active involvement in global climate actions, have not yet been sufficiently involved in protecting World Heritage in times of climate crisis. One central aim of the project was to motivate them to take responsibility for heritage. To encourage young people in this, we need to communicate the exceptional value of World Heritage and provide them with space and opportunities to explore and develop a personal connection with it. World Heritage must become a source of inspiration for expressing their identity and discussing how they want to shape a sustainable society for the future. Quality education is a key tool for achieving this, as foreseen in the 2030 Agenda and reflected in several of UNESCO's educational programmes, such as Education for Sustainable Development (ESD) • 7, Global Citizenship Education and Transformative Education.

"Young Climate Action for World Heritage" focuses on combining ESD with Word Heritage education • ¬ to address the specific challenges of climate change. ESD aims to provide people with knowledge, skills, competencies and attitudes that support sustainable development • ¬. World Heritage education, according to the World Heritage Convention, aims to raise awareness about World Heritage and the threats it faces while also strengthening respect for the heritage of humanity. World Heritage education and ESD have much in common: Both focus on the sustainable safeguarding of natural and cultural resources for the next generations, thus connecting the past, present and future. They both integrate local and global dimensions by creating learning opportunities in local contexts while addressing global issues and topics. In "Young Climate Action for World Heritage," ESD and World Heritage education are even more closely linked by focusing on current and future issues as well as practical learning opportunities.

"Young Climate Action for World Heritage" was a model project with an experimental character. It developed and tested an innovative approach to World Heritage education that was learner-centred, action-oriented, transformative and inter- and transcultural, focusing on urgent questions such as: How do young people experience "their" World Heritage site(s)? What does climate change mean for World Heritage Sites? How can the young generation take responsibility for sustainable heritage and climate protection? These questions were discussed, negotiated and creatively answered through the transnational collaboration of the project community consisting of students, teachers and experts from World Heritage Sites.

During the project, six World Heritage Sites worked together with 21 schools from the Czech Republic, Denmark, Germany, the Netherlands and Poland. Most of the schools are members of the UNESCO Associated Schools Network (ASPnet). In intercultural groups, the students explored the World Heritage Sites, examined how they are threatened by climate change and investigated their potential for sustainable actions. Sharing perspectives and taking action together with students from different schools and countries, and with World Heritage experts, inspired the students and created a positive motivation that was essential to counteract the sometimes intense and emotional debate on climate change. To engage the young peoples' interests, the on-site exploration formats were mixed, ranging from guided tours and joint hands-on activities to role play or creative and artistic approaches reflecting their experiences as well as personal and group reflections. This fostered a holistic and critical understanding of the World Heritage Sites' specific values, their current challenges and future potential. This approach also enabled students to form a meaningful connection to the sites by linking them to their personal interests and skills and the urgent questions they have about climate change and sustainability. All these dimensions were essential to prepare them for the next step: to initiate their own projects on World Heritage and climate protection throughout one school year.

In collaboration with their teachers and experts from the World Heritage Sites, the students developed and implemented a range of highly creative projects in the fields of art, media, games and quizzes, research and sustainable joint actions. Each of the diverse projects is characterized by the students' strong identification with "their" World Heritage Site, which motivated them to share their experiences and raise awareness of the challenges that climate change poses for World Heritage. This is the core success of "Young Climate Action for World Heritage". By focusing on sustainability and climate change in an intercultural context, the project achieved its goal: to contribute to a stronger connection between World Heritage education and ESD while also mobilizing young people to engage with World Heritage. The project contributed to the sustainable implementation of the World Heritage Convention and provided innovative experiences for all participants and project partners.

This publication presents the project concept and approach, its highlights and results and provides guidance and insights on the project's central question: How can young people actively engage in the preservation of World Heritage and climate protection? As the experience of this innovative model project shows, this endeavour is challenging but immensely fruitful. The project was characterized by strong commitment and engagement of the project community—students, teachers and experts from World Heritage Sites. It also highlighted institutional and organizational challenges and resource and capacity limitations. However, if young people are to take responsibility for World Heritage in times of climate crisis, professionals at World Heritage Sites, schools, and educational institutions must provide the necessary conditions, structures and opportunities for them to do so. "Young Climate Action for World Heritage" aimed to take one step in this direction. By providing a practical "Toolkit for Exploring World Heritage" we hope to inspire others to work with us on that track.



# Young Climate Action for World Heritage

1

# World Heritage and Climate Change: Threats and Potentials

"Young Climate Action for World Heritage" focussed on climate change at World Heritage Sites and addressed two dimensions: the impacts of climate change on World Heritage and the potential of heritage to inspire sustainable action.





# "Climate change will not only ruin our future, but also our past by ruining World Heritage Sites."

Student quote

Climate change poses extreme challenges to the mission of preserving and safeguarding World Heritage Sites for all people worldwide and generations to come.

Increasing weather extremes, sea level rise, ocean warming and glacier melting threaten the values and authentic character of World Heritage Sites through droughts, storms, fires, floods, a loss of biodiversity and changing ecosystems. Sadly, there are many well-known examples of the dramatic consequences of climate change, including the regular flooding of Venice and its Lagoon (Italy), the melting of glaciers on Mount Kilimanjaro (Tanzania) or the massive coral bleaching and dying at the Great Barrier Reef (Australia). Communities, ecosystems and societies in and around World Heritage Sites also suffer severely from climate change. Displacement of local communities or changes in land-use and ecosystems have immense consequences for the long-term safeguarding of World Heritage, which relies on intact environments and communities.



# "World Heritage properties can embrace transformative change to become demonstration cases of the change the world needs."

 Policy Document on Climate Action for World Heritage, UNESCO 2023

Imagining and building climate-resilient and sustainable futures is crucial to protect the planet, including World Heritage, now and in the future. World Heritage Sites themselves have a fundamental role to play in this process. They "embody inherited knowledge accumulated over generations, and serve as entry points for climate action" (ICOMOS & ICSM CHC 2022, p. 2). The World Heritage List includes large untouched natural landscapes, such as the Ancient and Primeval Beech Forests, a transnational World Heritage site encompassing 18 European countries. The beech forests are significant ecosystems and serve as carbon reservoirs. Cultural heritage sites are vital knowledge repositories, where local traditional techniques remain in use. At the Mines of Rammelsberg, Historic Town of Goslar and Upper Harz Water Management System (Germany), the historic water management system is used for climate-friendly energy supply today. Accordingly, one key potential of World Heritage education is its ability to connect past, present and future by "understanding how the properties came to be, their meaning for local and global communities and what opportunities they may offer for shaping the future" (Grünberg/ Zehbe 2022, p. 466).

"When I think of the World Heritage in the Harz region, I am reminded of our past and the importance of harnessing it for a better future." — Student quote



 Project community: Students, teachers and experts from the World Heritage Sites





"I got to know people from another country and saw how World Heritage connects us."

Student quote

# 2

# **Project Community**

The project focused on young people as actors with the potential to shape the future. The most important target groups were students from different types of schools in various countries. The network of UNESCO Associated Schools (ASPnet) in Germany and the neighbouring countries were eager to participate in the project as well as schools beyond ASPnet.

The second important target group were teachers as they empower students to develop their capacities, knowledge and values.

Effective communication of the meaning and values of World Heritage requires knowledge of the framework for its protection, conditions for its use and the challenges it faces. A primary goal of the Institute Heritage Studies is to generate this knowledge through a global scientific discourse and integrate it into educational programmes. The experts working at World Heritage Sites play an important key role in transmitting and conveying this knowledge and engaging young people in person and on-site where necessary. In this respect, they were identified as the third target group.

Together, the students, teachers and World Heritage experts formed the transnational project community with schools and World Heritage representatives from the Czech Republic, Denmark, Germany, the Netherlands and Poland. The climate crisis and World Heritage protection require joint action across national borders. Thus, the project also directly incorporated a fundamental aspect of ESD by emphasizing the need to think globally and act locally.

#### Schools

The UNESCO ASPnet in Germany consists of 300 schools and educational institutions of all types. The schools commit to promoting UNESCO's goals and values in their profiles and work and actively contribute to the implementation of the Sustainable Development Goals (SDGs), particularly SDG 4 on quality education.

The project aimed to establish and promote long-term partnerships between World Heritage Sites and included schools within and beyond the ASPnet.



# World Heritage Sites and participating schools



#### 1 Wadden Sea

Heinrich-Hertz-Schule Hamburg

Lindbjergskolen Herning

Simon Vestdijk School Harlingen

Theodor-Storm-Schule Husum

#### 2 Archaeological Border Complex of Hedeby and the Danevirke

A. P. Møller Skolen Schleswig

Domschule Schleswig

Klaus-Harms-Schule Kappeln

#### 3 Mines of Rammelsberg, Historic **Town of Goslar and Upper Harz** Water Management System

Adolf-Grimme-Gesamtschule Goslar

Gymnázium Třeboň

Tilman-Riemenschneider-Gymnasium Osterode am Harz

## 4 Erzgebirge/Krušnohoří Mining

Gymnasium Marienberg

Gymnázium Mladá Boleslav Prague

Oberschule "Gottfried Pabst von Ohain" Freiberg

#### 5 Herrnhut: **A Moravian Church Settlement**

Evangelische Zinzendorfschulen Herrnhut

Richard-von-Schlieben-Oberschule

Střední uměleckoprůmyslová škola sklářská Kamenický Šenov/ Max-Windmüller-Gymnasium Emden Secondary School of Glassmaking Kamenický Šenov

#### 6 Palaces and Parks of Potsdam and Berlin

I Liceum im. Stefana Banacha Żagań

II Liceum Ogólnokształcące im. Stanisława Wyspiańskiego Legnica

Rouanet-Gymnasium Beeskow

Sophie-Scholl-Schule Berlin

## **World Heritage Sites**

The six participating World Heritage Sites in Germany and neighbouring countries were ideally suited for the project due to their comprehensive experience in World Heritage protection and education, and their transnational and intercultural cooperations. Encompassing archaeological sites, gardens and cultural landscapes, urban settlements and natural heritage, the six sites reflect a diversity of heritage and illustrate the manifold challenges of climate change for different heritage types. Their experiences in dealing with climate change and their approaches to climate adaptation strategies fed directly into the project.

Further information about World Heritage and the participating World Heritage Sites: whc.unesco.org



### Wadden Sea

#### Contact

International Wadden Sea School c/o WWF, Anja Szczesinski anja.szczesinski@wwf.de www.iwss.org www.waddensea-worldheritage.org The Wadden Sea is a transnational World Heritage Site stretching for about 500 km along the coastline of the Netherlands, Germany and Denmark. It is the largest unbroken tidal flats system in the world, where natural processes run largely undisturbed, and winds and tides continuously change the coastal landscape. Biodiversity on a worldwide scale is reliant on the Wadden Sea, which sustains over 10,000 species of plants and animals and serves as a stopover for 10–12 million migratory birds on their journey to their wintering or breeding grounds.

The natural forces and dynamics of the Wadden Sea provide an invaluable record of past and ongoing dynamic adaptation of plants, animals and their coastal environments to climate change. It is a unique place to learn more about the connection between World Heritage and climate change. With feet in the mud and eyes on the horizon, students can discover the special ecosystem of the Wadden Sea with all their senses. They can observe snails and other creatures, understand how climate change and rising sea levels may seriously impact the characteristic biodiversity of the Wadden Sea, and discuss climate adaptation measures.



# Archaeological Border Complex of Hedeby and the Danevirke

#### Contact

Welterbe Haithabu e.V. bildung@haithabu-danewerk.de www.haithabu-danewerk.de/en Hedeby and the Danevirke are an outstanding testament to the Viking Age. On the narrowest strip of land between the Baltic and the North Sea, the Schleswig isthmus, they secured the border area between Scandinavia and Central Europe. This strategic location also facilitated extensive trade and exchange across both regions and seas. The commercial town of Hedeby was integrated into the ramparts of the Danevirke, which served as a border fortification that was continuously expanded by the Danish kings over the centuries. Hedeby was a flourishing trade centre in this border region. It was a hub of long-distance trade and supported a thriving community of craftsmen. Today, the Danevirke and Hedeby represent the close collaboration between Danes and Germans living together in this border region.

As an archaeological World Heritage Site, Hedeby and the Danevirke are particularly vulnerable to climate change processes that alter the ground and environmental conditions. Heavy rainfall, soil erosion and increasing water temperature could have negative impacts on the site's monuments, landscape and archaeological objects, both underground and underwater. At the same time, the development of renewable energies, such as the construction of wind turbines, might lead to conflicts between monument and nature preservation, tourism and economic interests. This raises important questions: How can we find a compromise between safeguarding archaeological World Heritage Sites and supporting sustainable energy development? How can Hedeby and the Danevirke contribute to a sustainable and climate-friendly region? These are intriguing questions for young people to discuss from different perspectives.



## Mines of Rammelsberg, Historic Town of Goslar and Upper Harz Water Management System

#### Contact

Mines of Rammelsberg Gesine Reimold reimold@rammelsberg.de www.rammelsberg.de/en Traces and monuments from 800 years of mining, formed by centuries of interaction between ore and man, are characteristic of this World Heritage Site. Mining in the Harz region began at the Rammelsberg. The mining activities of the rich non-ferrous metal ore shaped the town of Goslar and the surrounding landscape. They brought prosperity and political importance to the town, which is also reflected in the Imperial Palace (Kaiserpfalz). The Upper Harz Water Management System is considered the world's most important pre-industrial energy supply system, created between the 16th and 19th centuries to collect, store and channel water. The system includes important architectural monuments, both above and below ground, such as Walkenried Monastery.

The forests in the Harz Mountains are already among the most threatened in Germany due to climate change. The spruce forests, planted for construction and firewood for mining, are dying on a large scale. Soils have dried out due to increasing drought, and groundwater levels continue to fall, causing significant problems. In addition, there is an increasing risk of fire, storm damage, heavy rainfall events and flooding. It is an inspiring and provoking learning environment, where young people feel the dramatic consequences of climate change for World Heritage. At the same time, they can also reflect on historical water management and resource use, drawing inspiration from the past to inform climate action today and in the future.

# "I appreciate World Heritage Sites more through the project."

Student quote



# Palaces and Parks of Potsdam and Berlin

#### Contact

Stiftung Preußische Schlösser und Gärten, Education and Marketing: Silke Hollender s.hollender@spsg.de www.spsg.de/en/home The glorious gardens and palaces date back to the era of the electors, kings and emperors in the former residential cities of Berlin and Potsdam. This total work of art—a synthesis of architecture and garden art, of planned urban development and designed landscape—was developed from the 18<sup>th</sup> century onwards and extends from Sanssouci through the New Garden, Babelsberg and Sacrow to Peacock Island and Glienicke in Berlin. In the 19<sup>th</sup> century, the garden designer Peter Joseph Lenné combined several of these palace and garden ensembles into a park landscape. Today, these sites stand as a testimony to the perfection of the arts of architecture and garden design, attracting millions of visitors from Germany and abroad every year.

Climate change is placing a massive burden on the Potsdam–Berlin park landscape. The ageing tree population is acutely threatened by drought and heat and is slowly dying. There are around 80,000 trees in the parks, many of which are over 100 years old. These older trees, which reach heights of up to 30 meters, are particularly vulnerable to the effects of climate change. The Foundation of Prussian Palaces and Gardens is actively combating the consequences of climate change with numerous projects and measures. Visitors and young people are invited to engage with the threats facing this "green" World Heritage Site, gain insights into coping strategies and actively discuss potential solutions.

"For me, World Heritage is something that connects me to other people and unites us as humankind." — Student quote



# Erzgebirge/Krušnohoří Mining Region

#### Contact

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en

At this transboundary World Heritage Site that spans between Germany and the Czech Republic, the extraordinary abundance of raw materials in the Ore Mountains laid the foundation for mining development across entire region. A unique cultural landscape was shaped by mining over 850 years. The mining of silver, tin, cobalt and uranium set the conditions for outstanding scientific knowledge and pioneering innovations in mining and smelting. Important monuments from different mining periods have been preserved to this day, such as shafts and surface installations, heaps and surface depressions. The mining towns feature administrative, sacred and secular buildings that testify to the region's development. Moreover, mining in the Ore Mountains not only left a rich tangible heritage, but also an extensive intangible heritage, which is evident in the living traditions of the region.

Climate change is one of the greatest challenges to the protection and conservation of World Heritage Sites and will also play an increasingly important role in the German-Czech mining region in the future. The impacts of climate change on forests, water resources and mining towns and the potential of heritage for sustainable action are particularly relevant topics for young people to discuss in relation to the Erzgebirge/Krušnohoří Mining Region.



# Herrnhut: A Moravian Church Settlement

#### Contact

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Evangelische Zinzendorfschulen Herrnhut Katrin Filschke info@ezsh.de www.ezsh.de The Moravian Church Settlement Herrnhut was established in 1722 by Count Zinzendorf as a 'new town' and 'mother' settlement of the Renewed Moravian Church. Herrnhut's spatial plan, prototype architectural developments and overall distinctive Moravian Church character reflect the origin and evolution of Moravian religious and societal ideals. The model of the Herrnhut settlement was replicated in 27 additional Moravian Church settlements founded between 1738 and 1807.

During the "Young Climate Action for World Heritage" project, Herrnhut had been nominated as a transnational World Heritage Site, along with the Moravian Church Settlements of Gracehill in Northern Ireland and Bethlehem in the USA, as an extension of Christiansfeld in Denmark, which was the first Moravian Church Settlement inscribed. Herrnhut was listed as a World Heritage Site in July 2024. Through witnessing the process of Herrnhut becoming a transnational World Heritage Site, students were able to discover its global meaning and engage in sustainable safeguarding. They discussed and creatively dealt with the topics of monument conservation, urban development and climate change and proposed answers to the following questions: How can we preserve our heritage in times of climate change? How can we make a local contribution? And how do we want to live in and safeguard Herrnhut as a World Heritage Site in the future?

# Exploring the potential of heritage for sustainable and climate-friendly action — examples from "Young Climate Action for World Heritage"



• Nature conservation is vital for safeguarding the outstanding archaeological heritage of Hedeby and the Danevirke.



• In response to climate change challenges, the historical tradition of local nurseries in the "New Garden" has been revived to cultivate more climate-resilient plants.



What does mining have to do with the Freiberg district hospital?
 Students learned how the underground mine water in the mining town of Freiberg is used to provide sustainable ventilation and geothermal energy to the hospital today.



• Students tried out sustainable building techniques to safeguard the authentic quality of Herrnhut for the future.

• Transnational cooperation is vital for climate actions: The Trilateral Wadden Sea Cooperation is a longlasting example of this and was reenacted by the students in a role-play.





• At Rammelsberg, students can directly explore the topic of mining, recycling and sustainability—by analysing raw materials in experiments or recycling old technical equipment.

# The Pedagogical Approach: Connecting Education for Sustainable Development and World Heritage Education

"Young Climate Action for World Heritage" served as a pilot initiative with an innovative and exploratory approach. The project aimed to develop and test an educational approach that combines the World Heritage education and ESD and encourages young people to establish a personal connection to their heritage, link their own questions and interests to the World Heritage Site and become active in its protection.

World Heritage, as conceptualized and practically implemented in the project, is based on a multidimensional understanding of heritage and its function for identity-building and sustainable human development. Identity and sustainability require responsibility for heritage, and this, in turn, can only be successfully realized if the identity-defining significance of heritage is communicated to all target groups concerned with heritage and if they are involved in heritage processes (Albert 2022, p. 427). The project therefore combined World Heritage education with ESD as a practical educational programme ideally suited to implementing action-oriented learning with young people at World Heritage Sites.

The pedagogical approach of the project was informed by the UNESCO publication "Issues and trends in Education for Sustainable Development" (2018), which highlights three key pedagogical approaches in ESD. The following summary of these approaches is based on the box in the chapter "Learning to transform the world: key competencies in ESD" (p. 39–59), written by Marco Rieckmann.

"Projects that I engage students in take them on a learning journey through experience. I try to bring the world to the students. When we communicate, we can change the world, change our lives. The project enabled me and the students to raise awareness and inspire interaction around key themes such as climate change, sustainability, reducing our carbon footprint or water waste."

### — Teacher's quote

#### A learner-centred approach

A learner-centred approach focuses on the students and their interests, questions, experiences and pre-concepts. Gaining new knowledge and insights has to be understood as an active knowledge production, which is led by the students as autonomous subjects. Learning together with other motivated peers and outside the classrooms at the World Heritage Sites can help to stimulate holistic learning experiences.

#### Action-oriented learning

Action-oriented learning emphasizes that students learn most effectively when they are actively involved as subjects in dialogues and encounters, in actions and reflections, in hands-on-activities and the implementation of their own ideas. Action-oriented learning therefore opens schools and classrooms and includes experiences in different fields and settings. Students can choose between different strategies and action-oriented approaches: for example, conducting interviews, producing video clips, creating artworks or developing a campaign for their school community.

#### Transformative learning

Transformative learning experiences help students change their perspectives on the world and "become active and critical sustainability citizens" who are able "to participate in shaping a sustainable future" (Rieckmann 2018, p. 48). This involves creating learning opportunities for students in the real-world facing problems that are not solved yet—e.g. the threat of climate change to different World Heritage Sites.

This pedagogical approach departs from approaches to World Heritage education, which tend to prioritize the material and historical aspects of heritage, often employing traditional formats, such as guided tours and lectures. Together with the World Heritage Sites, on-site workshops were designed to combine a variety of formats and facilitate comprehensive learning experiences, allowing for engagement with the site at various cognitive, emotional, creative and practical levels and through intercultural exchange. In consideration of the diverse interests of the students, the workshops combined thematic tours on World Heritage and climate change, individual explorations, hands-on activities, peer-to-peer and expert-led reflection sessions, artistic approaches and role-play among other methods. The employed formats provided opportunities for students to experience the beauty and uniqueness of sites on a social and emotional level, reflect on own perceptions in intercultural groups and link their own questions and interests to the World Heritage Site.

To motivate the students to become active themselves, they participated in practical activities in nature conservation, garden maintenance, climate adaptation and research. They discovered climate-change-related threats to World Heritage, but also discussed adaptation strategies and solutions with the experts at the World Heritage Sites. And finally, over the course of the school year, they developed their own ideas on how they would like to make a difference to the World Heritage Sites and, in the spirit of transformative learning, implemented their projects in their schools and local communities.

The pedagogical approach also had an impact on the role of teachers and educators. It emphasized the teacher's role as a learning designer, coach, moderator and networker, who is responsible for the design and organization of learning processes and learning environments – inside and outside the classroom and together with experts, site managers and artists.

Formats and methods applied in the project are presented in the "Toolkit for Exploring World Heritage" (Part 3).

# Turning Approaches into Practice: Project Implementation

The project was implemented in three main phases, reflecting the project's topic and the pedagogical approach:

#### A shared experience—kick-off workshops on-site

The project community—students, teachers and World Heritage experts—met for the first time at the participating World Heritage Sites. Four days of exploratory on-site workshops enabled holistic experiences, allowing students to connect with the site on a cognitive, emotional, creative or hands-on basis that acknowledged their diverse interests. These on-site experiences were crucial in motivating the students to become active themselves. This enabled intense experiences, which were fundamental for the students' identification with the World Heritage Sites and were often vividly recalled throughout the whole project.

Discovering Hedeby and the Danevirke with a map

Jan-Aug 2022

Involving project community

"It felt great to meet other people who also care about our planet and are concerned about climate change. It showed that we are not alone and that we have to act. The knowledge I gained in Potsdam changed my perception of the problems of historic parks and the effects of climate change."

Student quote



• Lead casting at the Danevirke—students try out historic craft traditions



• Students remove invasive plants in coastal habitats at the Wadden Sea



• Feet in the mud: Exploring World Heritage Sites with all senses

Sept-Dec 2022

A shared experience kick-off workshops on-site

Jan-Aug 2023

An intense working phase – students immerse themselves in project development Sept-Oct 2023

Youth in Action – students present their projects



• Students, teachers and World Heritage experts in Berlin presenting their projects, exchanging ideas and discovering the Palaces and Parks of Potsdam and Berlin



• Students open their art exhibition at Rammelsberg



• German and Czech students present "Young Climate Action for World Heritage" and their student projects in Herrnhut

Nov
2023

Jan-Jun
2024

Zo24

Project results and publication, preparing and processing

Presentation of publication and project results

# An intense working phase—students immerse themselves in project development

Back in their schools, the students continued the work they had started during the workshops and immersed themselves in an intense working phase, transferring their on-site experiences into concrete actions. During one school year, and in some cases well beyond that, students reflected on what they had experienced, deepened their understanding of the sites and creatively developed their own projects. Initial ideas from the kick-off workshops were often adjusted according to new insights that students gained during the working phase. The teachers supported the students by integrating the project work into lessons and other related school projects or associations, like voluntary UNESCO clubs. The World Heritage experts supported the students with further information, connected them with other local heritage and climate experts and provided critical and constructive advice. At the end of this intense, often challenging and time-consuming process, the students identified strongly with the results they achieved and developed sustainable relationships with their respective sites.

The project community was supported by the Institute Heritage Studies and the German Commission for UNESCO throughout the working phase:

- 1 Webinars with the whole project community from all participating sites and schools
- 2 Weekly consultation sessions
- 3 Two teacher forums
- Four additional project days at schools/on-site
- Workshops and input by external experts on special formats, like videos or escape games

#### Youth in action—students present their projects

Many of the students' projects were made publicly available at their respective schools, the World Heritage Sites or in the local communities. These local presentations showcased the fruitful work of the project community and highlighted the active role of students as actors and multipliers throughout the whole project. By realizing and presenting their own projects, the students experienced a great sense of self-efficacy as they had created a real impact that was acknowledged by their peers, schools and local communities. They had truly become actors in the sustainable preservation of World Heritage Sites.

The final "Youth Summit" in November 2023 at the Palaces and Parks of Potsdam and Berlin World Heritage Site brought the whole project community together to present their projects to one another, World Heritage experts and the interested public. This event was one of the project highlights, where the students could apply the project methods once again: They experienced the World Heritage Site together in an intercultural group, discussed threats of climate change and participated in a role-play activity and artistic video workshop. The students' ability and motivation to discuss World Heritage issues and engage in heritage and climate protection was impressive. It made the "Youth Summit" a memorable experience for all involved.

# Project Highlights: Students Get Active for World Heritage and Climate Protection

The students' projects were the highlight of "Young Climate Action for World Heritage". The young people shared what they had learned about World Heritage and climate change with their peers and local communities in a variety of creative formats. Each project is a personal contribution reflecting the students' connections to the World Heritage Sites and their motivation to engage for heritage and climate protection.

Students' projects are presented here on an exemplary basis to provide impulses and inspiration.
All projects greatly contributed to the overall project success in their unique ways. They are presented in detail on the project website: www.heritagestudies.eu/youngclimateaction/en

• Act local, think global students from the I Liceum Ogólnokształcące im. Stefana Banacha Żagań (Poland) and Richard-von-Schlieben-Oberschule Zittau (Germany) met for a series of ASPnet student camps on sustainability in Zittau and Żagań



## From Potsdam to Zittau and Żagań: Getting into action and spreading the word

The Polish school Liceum im. Stefana Banacha in Żagań and the German Richard-von-Schlieben-Oberschule in Zittau took part in separate kick-off workshops in Herrnhut and the Palaces and Parks of Potsdam and Berlin. Motivated by the workshops, the Polish students got involved in preserving the local historic park in Żagań and the German students implemented sustainable actions in their school environment. They also joined forces to continue the intercultural exchange on heritage and climate change. Based on the concept of the project kick-off workshops, they organized two more ASPnet student camps in Zittau and Żagań, reaching out to other students and their local communities.

- Students from the Střední uměleckoprůmyslová škola sklářská/Secondary School of Glassmaking Kamenický Šenov (Czech Republic) created Herrnhut inspired jewellery and a glass cutting with Herrnhut motives
- Students from the Evangelische Zinzendorfschulen Herrnhut developed quizzes about Herrnhut and its values as a World Heritage Site





# Safeguarding the beauty of Herrnhut and sharing knowledge on World Heritage

The intercultural German-Czech cooperation of students in Herrnhut was fruitful for both sides: The Czech students were deeply impressed by the beauty of Herrnhut and applied their glassmaking skills to create Herrnhut inspired engraved glass tiles and pieces of jewellery. Their appreciation of the local heritage intrigued the Herrnhut students, who began to explore Herrnhut's global significance and deepened their knowledge of World Heritage. To share what they had discovered, they created various quizzes and games on World Heritage, Herrnhut and sustainability and actively contributed to the many World Heritage activities around the nomination and inscription of Herrnhut as a World Heritage Site.

Art exhibition of students from Adolf-Grimme-Gesamtschule Goslar at the Rammelsberg: Students presented personal and emotional drawings, installations and art work to express their concerns

about forest dieback in the Harz

• Students from Tilman-Riemenschneider-Gymnasium Osterode and Adolf-Grimme-Gesamtschule Goslar guide visitors through their underground escape game

## Arts and escape game about climate change in the Harz **Mountains**

The impacts of climate change in the Harz Mountains and at the Rammelsberg are severe and particularly visible in a massive forest dieback. The students feel and experience the changing environment in their everyday life. The project project gave them a chance to express their worries about it and become active and creative together. The students' concerns and their motivation to spread awareness sparked two creative and unique ideas: an art exhibition showcasing their personal artworks on climate change and forest dieback in the Harz Mountains and an escape game to be played underground in the mines of Rammelsberg. Both projects were developed and presented with great support from the teachers and the World Heritage Site. The students' art was exhibited in different museums in the region and is also planned to be displayed at other World Heritage Sites.

"More attention needs to be paid to the conservation of World Heritage to keep it for the generations after us, and we are designing a project to do just that!" — Student quote

- The Wadden Sea and in particular the mud flat walks inspired the students of Max-Windmüller-Gymnasium Emden to share their experiences in a self-made podcast
- Students of Heinrich-Hertz-Schule Hamburg, Theodor-Storm-Schule Husum and Max-Windmüller-Gymnasium Emden became film makers at the Wadden Sea. Supported by a professional film-making team, their results and perspectives were combined in an impressive short movie.





# Short movies with students' perspectives on the Wadden Sea

Students from Germany, the Netherlands and Denmark captured their experiences with the Wadden Sea in art and media formats. They shared what was most important to them: If we do not act now, the beautiful Wadden Sea and its biodiversity will be lost. Their films, podcasts and drawings are the result of research, interviews and reflections and show the students' commitment to the Wadden Sea.





"My contribution is to raise awareness of the problems and risks in order to move forward more effectively.

Together, we are strong. And the more people help, the greater the possibility that World Heritage Sites survive."

Student quote

- Students of A.P. Møller Skolen and Domschule Schleswig wanted to reach out to their peers and younger students. They creatively combined education and entertainment in an audio play and a mystery
- Students developed and designed a mystery dinner game, which can be purchased at the school.

dinner.





# Innovative and creative for Hedeby and the Danevirke

Students were intrigued when they found out that large parts of the archaeological heritage at Hedeby and Danevirke lay underground. They reflected on the tricky question of how to protect this heritage when landscapes are increasingly used for renewable energy production. For their projects, they chose creative formats: a mystery dinner and an audio play.

- Students from the Gymnázium Mladá Boleslav organized a sustainability and heritage rally in their school.
- Students from Marienberg Gymnasium wanted to raise awareness for World Heritage and the threats of climate change by realizing an Instagram campaign for the Erzgebirge / Krušnohoří Mining Region







# Beyond the project: integrating sustainability and climate change in World Heritage education at Erzgebirge/ Krušnohoří Mining Region

There is already strong awareness of the value of the mining heritage and the engagement for its protection in the Ore mountains. However, students are increasingly concerned about how climate change may affect this heritage in the future. The Czech group of students organized a rally about sustainability and World Heritage in their school, and the German students raised awareness on Instagram. They also made efforts to sustainably continue working on the topic in their schools with projects such as "Smart Mining Cities" supported by the local authorities for World Heritage.



# young Climate Action for World Heritage Czech Republic · Denmark · Germany · Netherlands · Poland

Historic Town of Goslar

Upper Harz Water Management System

almost done !

Mines of Rammelsberg

GAME

Archaeological Border Complex Hedeby & Danevirke Let's connect!

World Heritage Sites

and schools for climate action and sustainable development

UNESCO World Heritage Sites

ESCAPE

Wadden Sea









withour

World Heritage



How can we protect our World Heritage and act sustainably?





UNESCO

Associated

Schools



Moravian Church

Settlement Herrnhut

When the sea level orises,









TED Talk: Did you know ? Trees can get sun burned?



World Heritage

connects us

students care for Their parks at home





with the youngsters!

-World Heritage Candidate













# Results, Benefits and Guidance

# 1

# Results

The project contributed to the sustainable implementation of the World Heritage Convention by promoting meaningful learning experiences at World Heritage Sites. It strengthened the connection between World Heritage education and Education for Sustainable Development and mobilized young people to engage with World Heritage in times of climate change.

The project enabled students to develop a stronger connection with World Heritage and to become increasingly aware of the consequences of climate change. This awareness turned into a personal commitment that motivated them to get involved in World Heritage protection and to encourage others to do the same. The resulting student projects are a demonstration of the success of the project. They reflect the personal development of the young participants, the diversity of young perspectives, their creative and innovative thinking and their broadened awareness of heritage, the World Heritage concept and UNESCO.

World Heritage education, as implemented in the project, positions heritage as a valuable resource to inspire creativity and shape a sustainable future. The overall concept of the project and its pedagogical approach based on ESD helps to unleash the creativity of students and activates them to take responsibility in heritage matters. In the context of climate change, students felt empowered and positively motivated by the project's opportunities for joint, peer-to-peer and intercultural action. The link between ESD and World Heritage education was thus successfully made.

"Young Climate Action for World Heritage" also demonstrated different ways of transforming learning environments and outcomes through close collaboration between different partners, heritage sites and educators. In this way, the project helped to break down barriers between the classroom and the world beyond, creating opportunities for different learning journeys for all partners. The project is a strong transnational contribution in line with the mission of ASPnet, which has been founded as a "Scheme of Coordinated Experimental Activities in Education for Living in a World Community" in 1953.



# 2 Benefits

### Project benefits for students

- Active participation at World Heritage Sites and for climate protection
- Transnational cooperation with other students
- Self-led project development based on own interests and skills
- Presentation of their projects within their schools and local communities

#### Project benefits for the teachers

- Strengthened or new local and transnational cooperations with World Heritage Sites
- Strengthened or new cooperations with other schools from UNESCO ASPnet and beyond
- Integration of World Heritage into school structures and lessons
- Networking with other teachers interested in World Heritage, climate change and sustainability

### Project benefits for World Heritage Sites

- Enhanced understanding of young people's (potential) interest in heritage
- Strengthened and new cooperations with schools from the ASPnet and beyond
- Preparing, testing or enhancing educational offers with a focus on climate change
- Presenting the students' projects and their engagement to the public and in the local context

# **Guidance**

As a model project, "Young Climate Action for World Heritage" provided an excellent opportunity to explore how climate change threats to World Heritage and its potential for sustainable development can be integrated into educational approaches that motivate young people to take responsibility for their heritage. By doing so, it highlighted the role of World Heritage Sites as models for climate action and contributed to the "Policy Document on Climate Action for World Heritage" (UNESCO 2023), which calls on states parties to develop and implement:

"[...] activities aimed at improving education, in relation to the risks and responses related to climate change impacts on World Heritage properties, including programmes designed to promote these properties as exemplars of climate action."

- UNESCO 2023, 27

Based on the project experiences and results, key insights on how to foster World Heritage education that lives up to these demands were deduced. The following three "guiding principles" offer direction, encourage critical reflection and inspire action, all aimed at strengthening World Heritage education while contributing to climate action and sustainable development.

Three guiding principles for enhancing World Heritage education for climate and sustainable action:

# 1. ———Putting sustainability at the heart

#### — of World Heritage education

Actors at World Heritage Sites have extensive expertise in communicating their internationally recognized values through diverse educational formats. The UN 2030 Agenda for Sustainable Development acknowledges the potential of World Heritage Sites as learning places to foster sustainable development. However, this needs to be successfully communicated to educational and pedagogical institutions and actors beyond the World Heritage community. To fully realize the educational potential of World Heritage, pedagogical concepts and formats must explicitly address sustainability issues. Creating opportunities to reflect on the sites' past, present, and future and connect their values to today's pressing issues shifts World Heritage from a historical learning object to a resource for transformative education.



Sustainability as an integral part of the educational work at the Rammelsberg: In experimental workshops, students explored how traditional mining knowledge changes in the course of time and can thus help today's recycling processes.

#### - of project management

Educational projects about safeguarding World Heritage and raising awareness of sustainable development should be organized as sustainably as possible to remain authentic and true to their vision. Sustainable project management includes modes of transport, food, local actor involvement, inclusive and equal participation, long-term project impact and more.



 Exploring the Wadden Sea and Hedeby and the Danevirke by bike is fun and climate-friendly

#### of institutional development

World Heritage Sites should implement a holistic view of sustainability as an entire institution and accordingly anchor sustainability principles in all their actions. This approach enables the sites to transmit values and attitudes in favour of sustainability in an honest, authentic and comprehensible way. Also, schools that partner with World Heritage Sites and follow the "Whole School Approach" of ASPnet are well positioned to form sustainable partnerships and cooperations with World Heritage Sites.



• A holistic view of sustainability is a core principle of the Trilateral Wadden Sea Cooperation. These giveaway bags have been produced in a climate-friendly way from a recycled banner depicting the Wadden Sea.

2

# Encouragement and support of young people as co-creators

#### by students and teachers

It takes strong commitment for young people to be involved in a participatory process in which they have the opportunity to become actors themselves. Their motivation to participate is vital, as it is a challenging process with ups and downs. It is therefore important to include their interests and skills and consider their needs, worries and wishes in the project development. In addition to professional support on the project's topics, students need pedagogical support, which is best provided by their teachers. They also need spaces to discuss and try out their ideas and to gather their own experiences, which allow creativity to flourish and are free from judgement and grading.



 Exploring Hedeby and the Danevirke has motivated both students and teachers to work closely together to realize the students' projects.

#### by World Heritage Sites

Representatives of World Heritage Sites need courage, openness and flexibility to give young people opportunities to develop their own projects at, for, or about a site. Trusting and letting the target group decide is part of the process. At the same time, actors at World Heritage sites play a vital role in co-creation by enabling and empowering young people, providing them with meaningful on-site learning experiences that introduce the site's values, potentials and challenges. By giving support and critical advice throughout the process, the active involvement of young people can become a success for both the students and the World Heritage Sites.



• At the Rammelsberg mine, students were encouraged to develop their own visions for the World Heritage Site and express their concerns about climate change. This not only greatly benefited the site, but also the young people themselves.

#### by project managers and organizers

An open approach, which actively involves target groups as co-creators, needs more time and resources compared to projects where the aim and format of the results is defined beforehand. Project managers must communicate this to all involved to manage expectations. Flexible project management structures, enough time, resources and possibilities to adjust the project must be provided to enable young people to contribute and realize their own ideas.

# Sharing, collaborating and cooperating

#### Peer-to-peer

Getting active together and working with their peers provides great motivation for students to actively participate in a project. At World Heritage Sites, students can share their observations and experiences with each other, reflect on what they find interesting and often introduce new perspectives, especially in a transnational cooperation. Furthermore, in times of great challenges and crises—like the climate crisis acting united can empower students to become active despite negative future outlooks. Bringing students from different countries together in the "Young Climate Action for World Heritage" project has been vital for countering negative emotions and preventing resignation while transforming them into positive, solution-oriented learning experiences.



 Transnational peer-to-peer exchange was a key element of "Young Climate Action for World Heritage".
 The photo shows German and Czech students brainstorming their project ideas for the Mining Region Erzgebirge/Krušnohoří.

#### World Heritage and schools

Actors at World Heritage Sites have the expertise on their site's values, history, contexts, and key topics. Teachers know how to create meaningful learning experiences in which students can acquire knowledge and learn sustainably. Strengthening cooperation between schools and World Heritage Sites—understanding each other's structures and aims and collaboratively developing educational programmes—would greatly benefit World Heritage education. Furthermore, long term cooperation could be fostered by anchoring it in the structures of schools and World Heritage Sites. Capacity building for teachers about World Heritage and for World Heritage experts about education can provide ideal conditions to initiate, develop, test and implement World Heritage education programmes collaboratively. Cooperation agreements between schools and World Heritage Sites, laying out the envisioned activities as well as responsibilities and benefits for both sides, can foster mutual understanding of the cooperation and acknowledge it formally.



 The teachers of Evangelische Zinzendorfschulen and the local World Heritage experts from Herrnhut cooperated closely during the project and beyond, establishing the school as a key partner in World Heritage activities.

# World Heritage education and other educational programmes

On a more conceptual basis. World Heritage education is often most effective when it is linked to other educational programmes, Education for Sustainable Development (ESD), Global Citizenship Education, and transformative education play key roles. ESD, in particular, is well established in UNESCO ASPnet schools. Integrating World Heritage is thus a necessary step to reach more students and communicate the potential of World Heritage for sustainable learning to a broader audience. While resources and expertise on ESD are available, they must be expanded, and the unique potential of World Heritage for this education must be conceptualized and implemented. Extending these projects' results to other schools and groups of students would be highly beneficial, for example, by expanding existing school curricula to include heritage and World Heritage education.

# Toolkit for Exploring World Heritage

This last part of the publication is about getting active. The project's topics—World Heritage, climate change and sustainability—and its mission to engage young people in World Heritage and sustainable action are ideally suited for broader implementation at World Heritage Sites and schools beyond the project community. We therefore want to share some methods and formats that were tried and tested during the project as a practical "Toolkit for Exploring World Heritage."

The toolkit connects the topics of World Heritage, climate change and sustainability and aims to be explorative, creative, motivational and action-oriented. As the on-site explorations were instrumental in fostering students' commitment and motivation to take action, an explorative and action-oriented excursion to a (World) Heritage Site is the central part of the toolkit. The four parts of the toolkit provide impulses and guidance for preparing, conducting, and following up on the excursion. They consist of thought-provoking questions and activities for personal and collective reflection on World Heritage and invite people to rethink their relationship with "their" heritage.

The toolkit is intended for young people and teachers, World Heritage experts, educators, locals and visitors and any World Heritage enthusiasts seeking inspiration. The impulses and activities in the toolkit can be used at any World Heritage or heritage site. The toolkit can be worked on individually or collectively, in writing or orally, as a whole class or in working groups. It can be used directly by students, customized for different learning levels or serve as prompts for teachers and educators.

The four parts of the toolkit are structured as follows:

- 1 Preparation: Get Familiar With World Heritage
- 2 Time Capsule Laboratory: Impulses for On-Site Exploration
- 3 Impulses for Reflection
- 4 10 Steps to Develop Your Own World Heritage Project: Transferring Experience into Action



# 1 Preparation: Get Familiar with World Heritage



Before you start your exploration, you can use the impulses in this section to familiarize your group with the concept and idea of World Heritage and the challenge of climate change. You can do this in school or as an introductory session on-site, ideally in collaboration with local World Heritage experts.

#### World Heritage

What connects the pyramids of Giza in Egypt with the Statue of Liberty in New York or the Auschwitz-Birkenau concentration camp memorial with the Wadden Sea? They are all UNESCO World Heritage Sites. A World Heritage Site is a cultural or natural heritage site that has a unique significance for all people worldwide. UNESCO describes this unique significance as "Outstanding Universal Value". In other words, World Heritage Sites are valuable material traces, objects, buildings, natural areas or landscapes. They allow us to experience the history of humanity and the planet. They tell us much about human and natural development across different times and regions, showcasing cultural and natural diversity, innovative transformations, and the challenges, conflicts, and catastrophes, all of which are part of our shared heritage. Their destruction would be a loss for everyone in the world. Accordingly, World Heritage Sites should be protected by and for all of us. (Institute Heritage Studies 2022)

Want to test what you know about World Heritage? Do the IHS-quiz:

www.heritagestudies.eu/en/quiz-unesco-world-heritage

Have you ever inherited something, or will you inherit something? What does it mean to you?

Research the World
Heritage Site that you
plan to visit. You can
find it on the UNESCO
website:
https://whc.unesco.org/
en/list

What makes the World
Heritage Site you are
going to explore outstanding for all
humanity? Can you
think of something that
makes it special
or interesting to you?

How do you experience climate change in your home, at your school and in your community?

Have you ever heard about a heritage site being threatened by climate change?

Have you ever taken a climate-friendly action?



#### Climate Change

Climate change threatens World Heritage Sites everywhere on the planet. Storms, fires, floods, droughts, ocean warming and the loss of biodiversity endanger cultural and natural heritage. Examples of the dramatic consequences of climate change for World Heritage Sites include the regular flooding of Venice and its Lagoons (Italy), the melting of the glaciers on Mount Kilimanjaro (Tanzania) or the coral bleaching and dying on the Great Barrier Reef (Australia). Climate change makes collective efforts necessary to protect our World Heritage today and in the future.

# World Heritage as a driver for climate protection

World Heritage Sites are not only threatened by climate change. They can also inspire us to act in a climate-friendly and sustainable way. Natural heritage sites protect nature and the environment, preserve biodiversity and some even store carbon dioxide. Cultural heritage sites can teach us lessons about how people have farmed their land sustainably, how cities have been designed to be green and liveable, how water has been used as a source of energy or how climate-friendly materials can be used in construction.

#### Ready to explore? Here are tips for students and teachers to plan an engaging excursion to a World Heritage Site:

- Contact the site staff: Introduce the group who will visit the site, including their age and any special interests or abilities.
- Include active participation: Ask site staff about hands-on activities that students can participate in.
- Plan reflection time: Set aside time for students to connect, feel and reflect while on-site.
- Dress comfortably and bring recording materials: Wear clothing and shoes suitable for exploring.
   Bring paper and pens for notes and sketches or a camera to document your experiences.
- Prepare questions: Encourage the students to prepare at least one question to ask a guide or expert.

# 2 Time Capsule Laboratory **Impulses for On-Site Exploration**

Embark on a journey through time: Explore the World Heritage Site and take your time to stroll, pause and observe with your group or on your own. The impulses in this section can help you to discover not only the present of the site but also its past and its potential futures. If you feel like it, discuss your observations or questions with your classmates, your teachers, World Heritage staff, or other visitors.



 Taking sketches or photos helps students to observe and document what is interesting for them. It also helps educators to adjust their input based on students interests.

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→ Take a photo or sketch of the oldest trace of human history you can find. Compare it with the observations of your peers.

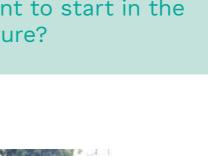


• Taking time and exploring the site alone or in a group is a good start for an excursion.

- → Safeguarding a heritage site requires the collective effort of many generations. But not everything can be protected. What remains from the past, and what
- → Imagine how people used to live here. Would you have liked to live here?
- → When you look at the history of the World Heritage Site, how did people deal with nature and culture? Was it sustainable? What was not sustainable? Discuss with each other.



Time travel works in all directions. Maybe you want to start in the future?



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- Did you know that trees can get sunburned? A gardener shows signs of climate change on the old trees at the Palaces and Parks of Potsdam
- → What place at the World Heritage Site impresses you most? How does it feel, sound and smell? Take your time to connect to the place. If you like, mark your favourite spots and those of your peers on a map, and then visit all of them together as a group.
- → How does climate change affect the World Heritage Site? Document any signs of climate change you observe. Ask an expert about the impacts of climate change.
- → How can tourists and visitors experience World Heritage in a sustainable way? How can transport, souvenirs, food, paths and trails, information and other elements be organized climate-friendly?
- → How can you help to protect the site? Write down ideas and share them in your group.



#### → Form a circle. Each person says what they want to protect for future generations and why.

- → Utopia or dystopia: What do you think this World Heritage Site will look like in 100 years? Make a sketch, drawing or collage to represent your ideas.
- → What traces of our time will be visible at the World Heritage Site in the future?
- → Record a message for the future inhabitants of the region in 100 years. Tell them why you think the site is special and still needs their protection.



 Students get rid of invasive species in coastal habitats along the Wadden Sea—directly making an impact and helping to sustainably protect the World Heritage region.



# 3 Impulses for Reflection



Need a break from the exploration? Find a place to sit and reflect on your experiences on-site, individually or in a group. Use the activities in this section to help guide your reflection.

# World Heritage scrabble

Write "WORLD HERITAGE" with a piece of chalk on the floor. In a group, add words in the vertical that you associate with World Heritage in general or the specific site you visited. Share and discuss the words with your group.

#### My World Heritage map

Close your eyes and think about the World Heritage Site you just explored. What comes to your mind first? What was most interesting to you, what impressed you and what is unforgettable? Draw the outline of your head. Now, draw your own mental map of how you see the World Heritage Site in your mind.

#### Mind map: When I think about my World Heritage, I feel...?

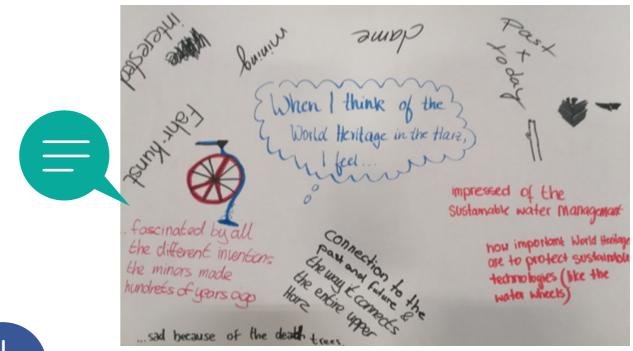
As a group, sit in front of a large piece of paper. Write down the above question and add the World Heritage Site you just explored. Now create a mind map together that reflects what you feel about the site. Does it make you happy, curious, thoughtful, thankful, sad or angry? You can use words, sketches, icons, quotes and any other means to document your feelings and emotions.

# Inspirations from the past to transform our future

UNESCO says: "World Heritage properties can embrace transformative change to become demonstration cases of the change the world needs." (Policy Document on Climate Action for World Heritage, UNESCO 2023) Does the World Heritage Site inspire sustainable or climate-friendly action today? Try to find examples. For inspiration, look at page 30–31.

#### Food for thought

UNESCO World Heritage Sites must be protected from climate change, and at the same time, they can contribute to strengthening climatefriendly action. However, climate protection and World Heritage protection can also come into conflict with each other. For example, the installation of renewable energy facilities (like solar panels or wind turbines) poses challenges for World Heritage Sites. Are solar panels on historic roofs in old towns a good solution for generating more climate-friendly energy? Should wind turbines be built in or next to natural World Heritage Sites or cultural landscapes? Reflect on how you would deal with renewable energies at the World Heritage Site you just visited. Put yourselves in the shoes of citizens, monument and nature conservationists, mayors and young entrepreneurs and discuss the question: Should the renewable energy facilities be placed at a World Heritage Site? How could they be installed without harming the "Outstanding Universal Value" of the site?



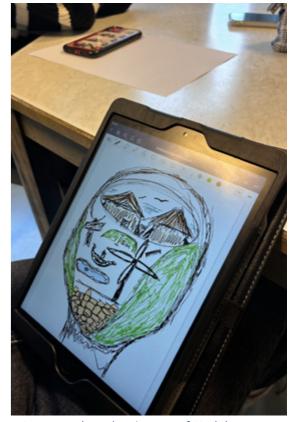
• The students' mind map shows what impressed them most at the Mines of Rammelsberg.



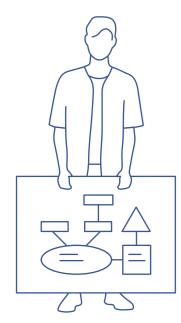
• Plan in time and find a good spot for on-site reflection. Maybe start with a game to foster cooperation?



• The kick-off workshops on-site started with a World Heritage scrabble.



• A personal student's map of Hedeby and the Danevirke.



# 4 10 Steps to Develop Your Own World Heritage Project: Transferring Experience into Action



Are you inspired to get active for World Heritage and climate protection? Then, follow this guide to develop your own project. For project ideas and inspiration, check out the "Young Climate Action for World Heritage" student projects:

www.heritagestudies.eu/ youngclimateaction/en/ success-and-results



- 1 Research World Heritage
  Sites in your hometown or
  region. Connect with the staff
  and schedule a visit. Take your
  teachers, friends or classmates—it's easier to work
  together!
- 2 Explore "your" site. Maybe use the "Time capsule laboratory" above to find out about the site's significance, potential threats, and opportunities. While exploring, talk to your peers, experts and other visitors. Make sure that you're able to answer this one question by the end of your visit: Why do you want to become active for its protection?
- 3 Share your experiences with your class or group and exchange perspectives.
- 4 Brainstorm ideas for your own project. Think about what YOU like to do, your skills, your interests and your competencies. What is it that you can do for the World Heritage that experts or adults may not have considered?
- 5 **Design** a project outline. Make sure to think of the following questions:
  - a) What kind of project would you like to start?
  - b) What is your aim?
  - c) Why is it beneficial? How does it address the topic of World Heritage and/or climate change?
  - d) Who is your target group?
  - e) Is it realistic and feasible?
  - f) What kind of support do you need (people, time, funding, etc.)?
  - g) Can you integrate your project into a school project, society or association?

- 6 Pitch your idea to your learning group and teacher and, ideally, to the staff at your World Heritage Site. They might have valuable feedback.
- 7 Adjust your ideas based on the feedback. Also, don't be afraid of further changes that might become necessary throughout the process, this is a normal part of project development.
- 8 **Get "cre-active"** and bring your project to life. Depending on the scope of your project, you might need to repeat steps 6–8 as your project evolves.
- 9 Present your project! In your schools, communities, at the World Heritage Site and on social media (you may also use the hashtag #YoungClimate-ActionForWorldHeritage).
- Reflect and celebrate! In your project group, reflect on what worked well, what did not, what you would do differently next time etc. And don't forget to celebrate your achievements!



**Glossary** 

# Literature

#### **UNESCO**

UNESCO, short for the United Nations Educational, Scientific and Cultural Organization, was founded in 1945 to promote peace and cooperation worldwide. Its mission is to build the defences of peace in the minds of people by fostering respect for shared values and encouraging intercultural dialogue. UNESCO focuses on improving education, advancing scientific knowledge, and celebrating cultural diversity. With its Headquarters in Paris, its Regional Offices, National Commissions and networks, UNESCO operates worldwide, working on global projects that collectively tackle big challenges like climate change and educational inequality.

#### **World Heritage Convention**

The World Heritage Convention adopted in 1972 is an international agreement between the member states of UNESCO. As of 2024, it has been ratified by a total of 195 States Parties. The Convention's main aim involves "ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage" that is significant for all humanity (UNESCO World Heritage Convention, Article 4). Accordingly, the Convention specifies what is defined as cultural and natural heritage and describes the criteria and procedures by which cultural and natural sites are designated as World Heritage.

#### **World Heritage Sites**

According to Article 1 of the World Heritage Convention, cultural heritage includes monuments, ensembles and sites. Some well-known examples of cultural World Heritage Sites include monuments like the Cologne Cathedral (Germany) or the Hiroshima Peace Memorial (Japan), ensembles like the Historic Centre of Florence (Italy) or industrial sites

like the Mines of Rammelsberg, Historic Town of Goslar and Upper Harz Water Management System (Germany). Palmyra (Syria) is a well-known example of a large archaeological World Heritage Site.

According to Article 2 of the World Heritage Convention, natural heritage includes unique natural formations and valuable habitats for endangered plant and animal species that must be protected. Objects of significant ecological processes and beautiful landscapes are also protected as natural heritage. Well-known natural World Heritage List include the Wadden Sea (Germany, Denmark, the Netherlands) and the Great Barrier Reef (Australia). Both form unique habitats for thousands of animal and plant species.

#### **Outstanding Universal Value**

To determine whether a site has significance for humanity as a whole, it must demonstrate "Outstanding Universal Value" (OUV for short). UNESCO uses this term to describe the unique significance of a site. UNESCO has established ten criteria for evaluating this value. Sites must meet at least one of these criteria to be recognized as having OUV.

#### **World Heritage List**

The World Heritage List is a catalogue of sites recognized by UNESCO as being of outstanding value to humanity. It includes monuments, groups of buildings, and natural features that exemplify the shared heritage of human civilization and the Earth's biodiversity. Established under the World Heritage Convention, the list aims to identify, protect, and preserve these sites for future generations. As of October 2024, it encompasses 1,223 sites across the globe, ranging from the Great Wall of China to the Galápagos Islands. Inclusion in the list often

brings international attention and support for conservation efforts.

#### **Transnational World Heritage**

Cultural and natural heritage sites do not stop at borders and are sometimes located in more than one country. If two or more countries make a joint nomination for a site to become World Heritage, it is called transnational World Heritage. This means that the Outstanding Universal Value and the responsibility to safeguard it is shared across borders by the respective countries. Examples of transnational World Heritage Sites include the Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe, which are located in 18 countries throughout Europe, and the Erzgebirge/Krušnohoří Mining Region, which is located in the border region shared by Germany and the Czech Republic.

#### **World Heritage Education**

Education is an important responsibility outlined in the World Heritage Convention. Article 27 emphasizes the need to integrate the understanding and appreciation of World Heritage into educational programmes, encouraging respect for these sites and promoting their protection. In this publication, this term refers to all educational activities dealing with World Heritage on a local, national and international level, as well as those run by UNESCO in the World Heritage Education Programme.

#### **Sustainable Development**

Sustainable development refers to human development that meets the needs of the current population without harming or compromising the needs of future generations. It considers the long-term protection of the environment and the safeguarding of culture, cultural diversity and cultural heritage.

## Education for Sustainable Development

Education for Sustainable Development (ESD) aims to provide learners of all ages with the knowledge, skills, values and agency to address interconnected global challenges. These challenges include climate change, loss of biodiversity, unsustainable use of resources, and inequality. Empowering people to make informed decisions and take individual and collective action for societal transformation that supports sustainable development is at the heart of UNESCO's "Education for Sustainable Development: Towards achieving the SDGs (ESD for 2030)" framework. ESD encompasses a lifelong learning process, addressing the cognitive, socioemotional, and behavioural aspects of learning, as well as learning content, pedagogy and the learning environment itself.

## UNESCO Associated Schools Network (ASPnet)

The UNESCO Associated Schools Network is a global network of more than 10,000 schools in over 180 countries that closely work together to implement the goals and values of UNESCO. These values include human rights and dignity, gender equality, social progress, freedom, justice and democracy, respect for diversity and international solidarity. ASPnet schools focus their efforts on three interconnected thematic areas that are at the heart of Sustainable Development Goal 4 on Education, Target 4.7, and the 2023 Recommendation on Education for Peace, Human Rights and Sustainable Development: Education for Sustainable Development, Global Citizenship Education and intercultural and heritage learning.

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