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THE LEIRUVOGUR HARBOR RESEARCH PROJECT INTERDISCIPLINARY ARCHAEOLOGICAL EXAMINATION OF A VIKING HARBOR AND ITS HINTERLAND IN ICELAND

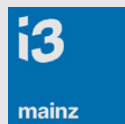
EUROPEAN HARBOUR DATA REPOSITORY



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European Harbour Data Repository

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European Harbour Data Repository

General introduction and critical comment

General introduction and critical comments

The European Harbour Data Repository is a series of databases which were compiled in the framework of the DFG-funded Priority Program 1630 “Harbours from the Roman Period to the Middle Ages” (Kalmring/von Carnap-Bornheim 2012; Engel/Kunz/Müller/Werther 2018; <http://www.spp-haefen.de/en/home/>). It is part of the virtual HARbour Research Environment “HARE” (<http://haefen.i3mainz.hs-mainz.de/>) and catalogues harbours, harbour-related infrastructure, and vessels all over Europe with a chronological focus on the Roman and Medieval Period.

Different digital volumes of the data repository have been compiled by several project teams within and without the Priority Program. Therefore, the spatial and chronological focus, as well as the size of the datasets, differ significantly. Furthermore, some of the datasets cover a specific region and period which is representative as possible, whereas other datasets focus on selected sites. We try to minimize data overlap, but in some cases, this was not possible.

A cross-disciplinary, cross-period, and cross-border database is a challenge. We hope that our method will have a benefit for the research community. Given the spatial and chronological scale and the diversity of sources, this Data Repository does not aim to be exhaustive – and it is still growing, thus not yet completed. Before using this data collection for further analysis, it is absolutely necessary “to verify and restrict content spatially and temporally,” as recommended by Roosen and Curtis (2018), since the data is patchy especially on a supra-regional scale. We should add that the topics have to be carefully chosen as well, and the data quality must be kept in mind (see e.g. Cooper / Green 2015; Roosen / Curtis 2018; Wilson 2011).

Every user has to be aware of these restrictions, especially when combining different datasets for quantitative analysis!

Scientific, Authentic and Ethical Data Collection

In his paper “Geospatial Big Data and Archaeology”, McCoy (2017) discusses the need to “produce data and results that are scientific (testable, replicable), authentic (a faithful representation of the archaeological record and the human past), and ethical (protects cultural resources).”

To produce data that is scientific, the relevant sources are described for every dataset as well as their accuracy, nature and quality. Furthermore, each database has a specific introduction and critical comments [the “Stand-alone Quality Report” after (McCoy, 2017)], which contains detailed information on the data’s quality and nature, collection methodology, strengths, pitfalls and gaps. Every database and volume of the European Harbour Data Repository is based on an identical database architecture and uses the same thesauri to guarantee interoperability. Before publication, every database is checked by the editors with a specific protocol to prevent inconsistencies, gaps, spelling mistakes or thesaurus misuse.

To produce data that is authentic, each dataset has one or several clearly named author(s), who have been responsible for data collection and the transfer and translation in the database architecture. All these authors are experts in specific research on their field. Furthermore, the data collection is part of a distinct research project with a clearly defined topic as well as spatial and chronological boundaries.

To produce data that is ethical and to protect the archaeological heritage and prevent looting and vandalism, the spatial accuracy of longitude and latitude has been reduced to three decimal places. Nevertheless, the precision is still sufficient for manifold spatial analysis.

Data and Database Architecture

Ordinary EXCEL sheets have been used for data acquisition, similar to the established process of data collection in the Harvard “Digital Atlas of Roman and Medieval Civilizations” (<https://darmc.harvard.edu/>), “The Oxford Roman Economy Project” (<http://oxrep.classics.ox.ac.uk/>) and the “Database of Ancient Ports and Harbours” (<http://www.ancientportsantiques.com/> and de Graauw 2016).

Each entry (i.e., each row of the table) has a specific ID (i.e. column «ID_place») and consists of a certain number of details/attributes (i.e., columns of the table), such as the site name, its geo-coordinates, the function or the dating and the certainty of these data. As the EXCEL structure does not allow for a relational data model, datasets are sometimes split for locations with heterogeneous information: for example, a harbour city with a roman quay and a medieval landing site.

Specific obligatory thesauri (see below) have been predefined for most of the columns in order to standardise details/attributes. Nevertheless, the level of detail of data entry may differ significantly from author to author. In fields with multiple entries, these are separated by a semicolon. Each dataset is referenced with short titles of modern and/or ancient authors in the database, which refer to the full and separate bibliography.

Due to legal restrictions and ethical issues (looting and vandalism), some of the databases have not been published completely with all the existing datasets and sites. In this case, the authors specify the restrictions and scientific use of the full version for a specific purpose, as it may possibly be on inquiry.

Geographical localisation

All geographical coordinates are latitude and longitude in decimal degrees (WGS 84). We distinguish between the security and the precision of the localisation. The security is the spatial reliability of the localisation, which is highest for a precisely-measured archaeological feature and lowest/very uncertain for locations in written sources which are located with weak indications. The precision is more technical, and is mainly determined by the precision of the base map or zoom factor during mapping.

For very fuzzy geographic information from written sources, which only allow for the identification of a specific watercourse (e.g. “navigation on river xy”), the specific key code “fuzzy location” has been used. In these cases, the geo-coordinates have been placed at a location at the watercourse which seemed most likely to the author.

Chronological information

Chronological information is based on manifold data, whereas precision and reliability differ significantly, which is documented in detail. The main chronological information could be found in the columns by century. If the chronological information is reliable, a “yes” has been filled in; if the chronological information is not reliable or the author had to deal with intervals of uncertainty (e.g. ¹⁴C-dates), “assumed” has been filled in. Additionally (!), the columns “Date_min” and “Date_max” are used for precise numerical dates, especially in case of a precise terminus post quem or terminus ante quem. Nevertheless, every author determines how he exactly used these fields.

At the end of each dataset, you may find comments of the authors or additional information, which did not coincide with the database scheme.

Mistakes are inevitable – please contact us, if you find any of them!

Data Formats

The databases are available as Excel-file as well as .csv to allow for long-term reusability. They could easily be integrated in geographic information systems and data management and analysis tools. All additional information is available as .pdf.

Credits

The European Harbour Data Repository is edited by Lukas Werther, Hartmut Müller, and Marion Foucher, supported by Sebastian Steppan. Every volume of the Data Repository is authored by one or several specialists. The European Harbour Data Repository is a result of the DFG-funded Priority Program 1630 “Harbours from the Roman Period to the Middle Ages.” The database has been designed by a team of archaeologists, historians, geographers, and information technology specialists at Jena University and the University of Applied Sciences Mainz. The work is strongly supported by the Centre for Baltic and Scandinavian Archaeology Schleswig (Claus von Carnap-Bornheim) as well as the other PIs of the Priority Program (Falko Daim, Peter Ettel, and Ursula Warnke) as well as all projects in the Priority Program (<http://www.spp-haefen.de/en/projects/>). Data publication and archiving for long-term availability is supported by Digitale Bibliothek Thüringen (<https://www.db-thueringen.de>).

License

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Bibliography

Cooper / Green 2015 - A. Cooper/ C. Green: "Embracing the complexities of 'big data' in archaeology: the case of the English Landscape and Identities project", *Journal of Archaeological Method and Theory* 23 (1), 2015, 271-304.

McCoy 2017- M. D.McCoy, Geospatial Big Data and archaeology: Prospects and problems too great to ignore. In: *Journal of Archaeological Science*, 84, 2017, 74-94.

Engel/Kunz/Müller/Werther 2018 - T. Engel/A. Kunz/H. Müller /L. Werther: Towards a Virtual Research Environment for Ancient Harbour Data. In: C. von Carnap-Bornheim/F. Daim/P. Ettl u. a. (ed.): *Harbours as object of interdisciplinary research. Archaeology + history + geosciences. RGZM Tagungen 34 (Mainz 2018)* 59–69.

De Graauw 2016 - A. de Graauw: *Ancient Ports and Harbours. Volume 1: The Catalogue*. <http://www.ancientportsantiques.com/docs-pdf/> [access: 24 June 2016].

Roosen / Curtis 2018 - J. Roosen/D. R. Curtis: Dangers of noncritical use of historical plague data,. In: *Emerging Infectious Diseases*, Vol. 24-1, January 2018, 103-110.

Wilson 2014 - A. Wilson: Quantifying roman economic performance by means of proxies: pitfalls and potential. In F. de Callataÿ (ed.): *Quantifying the Greco-Roman economy and beyond. Pragmateiai 27 (Bari 2014)*, 147-167.

Kalmring/von Carnap-Bornheim 2012 - S. Kalmring/C. von Carnap-Bornheim: DFG-Schwerpunktprogramm 1630 «Häfen von der Römischen Kaiserzeit bis zum Mittelalter. Zur Archäologie und Geschichte regionaler und überregionaler Verkehrssysteme» bewilligt. *Jahresbericht Zentrum Baltische und Skandinavische Archäologie* 2011, 2012, 28–31.

Volume 6

Project The Leiruvogur Harbor Research Project. Interdisciplinary Archaeological Examination of a Viking Harbor and Its Hinterland in Iceland

Specific introduction and critical comment

FRAMEWORK OF DATA COLLECTION

Data collection for this database took place during 2012-2015, in the framework of Priority Program 1630 Harbours, project “The Leiruvogur Harbor Research Project. Interdisciplinary archaeological examination of a Viking harbor and its hinterland in Iceland” in collaboration with Central geophysical project.

The responsible author is Sven Kalmring, Centre for Baltic and Scandinavian Archaeology (ZBSA).

The principal investigators of the project are Jesse Byock (UCLA) and Claus von Carnap-Bornheim (ZBSA), the secondary investigators are Davide Zori (UCLA) and Sven Kalmring (ZBSA).

TOPICS AND CONTENT

The main topic of this database are harbours of the Viking Age/Post-Medieval period in the Northern Atlantic.

Furthermore, selected infrastructure connected to harbour activities and navigation such as water toll/naval duties have also been integrated.

The database contains 1 dataset, including harbours.

SPATIAL COVERAGE - DETAILS

The working area for data collection has been the Northern Atlantic.

The pivotal point was the area of the Leiruvogur Lagoon of the Faxaflói Bay.

Additionally, selected datasets have been collected in the area Mosfell valley because of its function as a settlement chamber to the landing site; connected to important terrestrial route/road.

A systematic data collection has been carried out for the area “Inner-” and “Outer Skiphóll”, the Skiphóll mound, Blikastaðanes as well as Skeggjastaðir.

SPATIAL STRENGTHS AND LIMITATIONS

It was not the aim to create a representative dataset for the whole area, but to focus on specific high-quality sites. Therefore, spatial analysis and especially regional and supra-regional analysis is limited.

TEMPORAL COVERAGE - DETAILS

The temporal focus of the database is the period AD 871 – 1500.

The database is most representative for the Viking Age and Post-Medieval period.

CHRONOLOGICAL STRENGTHS AND LIMITATIONS

Due to tephrochronology and written sources, the chronology for the Viking Age and Post-Medieval period is particularly well.

SOURCES

Data collection for this database is mainly based on written sources, maps, archaeological sources, geoarchaeological sources and geophysical sources which have been collected by own fieldwork and a bibliographical survey.

The following sources were particularly important for Leiruvogur: written sources (Landnámabók, Kjalnesinga saga, Gunnlaugs saga ormstungu, Flóamanna saga, Egils saga Skalla-Grímssonar).

FINAL REMARKS

This ship-landing site of Leiruvogur (“Tidal Flats” or “Clay Bay”) from Iceland’s settlement (9th and 10th century) lies at the coastal mouth of the Mosfell Valley in southwestern Iceland. Until now the site had eluded discovery. Focusing on this harbor and selected inland Mosfell Valley sites, The Leiruvogur Harbor Research Project (LHRP) employed a battery of archaeologically related tools, including geophysical, oceanographic, marine sedimentary, aerial-photographic, textual, and historical analysis. The result is a broad-based harbor and hinterland study, unearthing one of the most frequently-mentioned harbors in the Icelandic family sagas. The Leiruvogur harbor was a complex of several landing sites, each with advantages and usages. The central Viking Age harbor was an exceptionally well-sheltered lagoon at the far inner reaches of Leiruvogur Bay. Rare for this part of Iceland, the lagoon was a site suitable for long-term anchorage and provided the best Viking Age anchorage in the large Faxaflói Bay region of southwestern Iceland (the region of modern Reykjavík). The presence of fresh water from two streams emptying into the bay at the harbor site helped us to define the targeted cultural sites. A significant result of the 2012-2014 field seasons was the discovery that the large Skipphóll Mound at the inner reaches of the lagoon was a man-made construction of the Viking Age.

European Harbour Data Repository

Key words and thesauri

Harbour Terminology for Data Integration in HARE, Version 1.1

Fields and Key Codes

A list of key codes has been defined for every column of the database as a guideline for the authors. As this list contains information, which is crucial to understand and reuse the database, we reproduce the full version.

ID_place	Numeric ID of each dataset
Author	Editor/author of the dataset, multiple references possible; format " <i>M. Mustermann/S. Sample</i> "
Project	If you are a member: project assignment in Priority Program 1630, use the <u>short titles</u> on http://www.spp-haefen.de/en/projects/ [thesaurus obligatory]; If you are no member: use a coherent short title of your project or affiliation
Year	Year of the creation of the data set; You could add the year(s) of substantial revisions
Status	<u>1</u> : Data set completed and confirmed in most instances, <u>2</u> : Data set in progress, <u>3</u> : Data set uncompleted and not confirmed [thesaurus obligatory]
Public	<i>internal</i> (only visible/accessible for registered HARE user), <i>open</i> (open access in the WebGIS); [thesaurus obligatory]
Latitude	Decimal Degrees if possible, minimum two and maximum six decimal places; negative values in the South if necessary; Projection WGS 84; Best practice: Google Earth - Options - Longitude/Latitude - Decimal Degrees
Longitude	Decimal Degrees if possible, minimum two and maximum six decimal places; negative values in the West if necessary; Projection WGS 84; Best practice: Google Earth - Options - Longitude/Latitude - Decimal Degrees
Country	Country (English name)
Name_mod	Modern or common scientific name, usually toponym of the town/village/place, if necessary supposed place/locality
Name_hist	Historic name, multiple references possible
Hydro_type	Hydrological position: <i>River, Lake, Sea...</i> [thesaurus obligatory]; the assignment determines if it is an inland harbour or a maritime harbour; multiple alternative entries possible in case of transition areas

Hydro_name_mod	Modern name of the hydrological unit (River, Lake, Sea, Specific part of a coastline...)
Hydro_name_hist	Modern name of the hydrological unit in the specific context of the source
Locat_secure	Reliability of the localisation/spatial reliability; <i>highly reliable</i> (e.g. excavated features), <i>reliable</i> , <i>uncertain</i> , <i>very uncertain</i> [thesaurus obligatory]
Locat_text	Descriptive text concerning the reliability of the localisation/spatial reliability and the underlying data , e.g. "Location at river xy", "Location because of having the same name as a modern place/town/village"
Locat_precision	Precision of the localisation (1: meters, 2: hundreds of meters, 3: kilometers, 4: modern place mapped, 5: modern hydrological unit mapped, <i>fuzzy location</i>) [thesaurus obligatory]
Source_hist	Historic proof for the harbour/locality (written source, picture, map...); <i>yes/no/assumed</i> [thesaurus obligatory]
Source_feature_arch	Archaeological or geo-archaeological features for the harbour/locality; <i>yes/no/assumed</i> [thesaurus obligatory]
Source_find_arch	Archaeological finds as an indication for the harbour/locality (imported goods, coins, parts of ships...); <i>yes/no/assumed</i> [thesaurus obligatory]
Source_other	Other proof/sources; please use key words (e.g. toponym, oral tradition...)
Place_type_general	General definition of the place described: <i>harbour</i> [including anchorages, ferry harbours, start and end points of transport by ship in written sources], <i>canal/portage</i> , <i>waterway</i> [especially for written sources, e.g. proof for navigation on a certain river without specific information about a harbour locality], <i>vessel</i> , <i>other</i> [thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_technique	Harbour terminology in matters of construction/building technique. Constructive key termini: <i>landing</i> [general term for quay, wharf, jetty, pier], <i>quay</i> , <i>quay wall/wharf</i> , <i>pier/jetty</i> , <i>mole</i> , <i>breakwater</i> , <i>landing place (hythe, landing site)</i> , <i>landing place with installations</i> , <i>bank revetment</i> . Other constructive termini: <i>pontoon</i> , <i>canal</i> , <i>anchorstone</i> , <i>floating barrier</i> , <i>boat slip/slipway</i> . Ship-specific termini: <i>raft</i> , <i>planked vessel</i> , <i>logboat</i> , <i>extended logboat</i> , <i>flat bottomed vessel</i> , <i>keelboat</i> , <i>other water vessel</i> [e.g. with textile shell] <i>boat/ship parts</i> [e.g. paddles, rows, ropes, sails] [multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_topography	Topographic position of the harbour. Main topographic terms: <i>sea harbour/port</i> , <i>inland harbour</i> , <i>river harbour</i> , <i>lacustrine harbour</i> , <i>river mouth harbour</i> , <i>confluence harbour</i> , <i>island harbour</i> , <i>tidal harbour</i> , <i>lagoonal harbour</i> , <i>fjord harbour</i> , <i>canal harbour</i> , <i>harbour basin</i> , <i>anchorage</i> , <i>natural obstacle for navigation</i> [details in comments]. Other topographic terms: <i>open harbour</i> [permanent access], <i>closed harbour/dock</i> , <i>harbour basin separated by a mole</i> , <i>parallel harbour</i> [riverine], <i>outer harbour</i> , <i>dead-end harbour canal</i> , <i>Geestrandburg</i> , <i>Gewerbewurt</i> , <i>Langwurt</i> [multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_infrastructure	Infrastructure for harbour operation and additional facilities. Central infrastructural terms: <i>shipyard</i> , <i>dockside crane</i> , <i>boathouse</i> , <i>boat slip</i> , <i>lighthouse</i> , <i>storehouse</i> , <i>corporation of boatmen/guild</i> [e.g. <i>nautae</i>], <i>river crossing</i> , <i>bridge</i> , <i>ford</i> , <i>connected to important terrestrial route/road</i> . Other infrastructural terms: <i>dolphin</i> , <i>mooring pole</i> , <i>bollard/belayer</i> , <i>buoy</i> , <i>fender</i> , <i>cairn</i> , <i>Vorr</i> , <i>Baumhaus</i> , <i>harbour palisade</i> , <i>barrage</i> , <i>derrick/davit</i> , <i>tow path</i> , <i>sluice</i> , <i>fishery</i> , <i>water mill</i> , <i>dam</i> . [multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_function	Function and purpose of the harbour. Central function-specific terms: <i>commercial/trade harbour</i> , <i>naval base</i> , <i>origin/destination of transportation by ship</i> [from written sources], <i>ferry harbour</i> , <i>landing place</i> [synonym <i>hythe</i> , <i>landing site</i>], <i>port</i> , <i>fishing harbour</i> , <i>transshipment harbour</i> , <i>safety harbour</i> , <i>beach market</i> , <i>shipyard</i> , <i>water toll/naval duties</i> , <i>waterway</i> . Other function-specific termini: <i>dockland/waterfront</i> , <i>staple port</i> , <i>Schiffsländerburgus</i> , <i>villa maritima</i> . Ship-specific termini: <i>inland vessel</i> , <i>seagoing vessel</i> , <i>ferry</i> , <i>cargo vessel</i> , <i>naval ship</i> , <i>fishing/working vessel</i> , <i>rowing facilities</i> , <i>sailing facilities</i> , <i>towing/hauling facilities</i> , <i>paddling facilities</i> , <i>punting/staking facilities</i> . [multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]
Goods_finds	Proof for specific transported goods and other specific finds and groups of material: <i>cargo</i> , <i>passengers/people</i> , <i>food</i> , <i>fish</i> , <i>wine</i> , <i>grain/cereal</i> , <i>oil</i> , <i>salt</i> , <i>people</i> , <i>pottery</i> , <i>amphorae</i> , <i>barrels</i> , <i>stone</i> , <i>timber</i> , <i>straw/hay</i> , <i>iron/ore</i> [Multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]

Actors_activity	Harbour- and navigation-specific actions and events as well as specific user groups: <i>upstream navigation, downstream navigation, hauling/towing, sailing, paddling, rowing, stake/punt, shipwreck, piracy</i> [Multiple entries possible; thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_hierarchy	Individual expert evaluation concerning the hierarchical order and importance of the harbour concerning the spatial extent of its importance, its position in the harbour network, the frequency and duration of its use, the general constructive effort, the spatial connection to sites of production and consumption as well as terrestrial routes: <i>global importance, supraregional importance, regional importance, local importance, seasonal/periodical use, permanent use, peripheral location, central node, short-term use, long-term use, no proof for actual use, substantial harbour infrastructure/buildings, no substantial harbour infrastructure/buildings, Connected to important terrestrial route/road, Connected to an important productive site, Connected to an important consumer site, connected to an important center of administration or power, connected to an important religious center, connected to an important military base.</i> [Please use multiple entries; thesaurus obligatory – see the full thesaurus below for details and definitions]
Place_secure_info	Comments on the reliability of the classification of the harbour/location, free text (general, technique, topography...); e.g. (always together with a specific classification/category): <i>explicit archaeological features/historical proof; implicit/highly interpretive archaeological features/historical proof; classification of a modern author/academic based on an unsecure/unclear basis</i>
Date_min	Earliest proof in absolute calendar years [if only the century/centuries or a certain period is known: fill in the starting year/terminus post quem]; <u>only one number</u> [numeric], no text and no special characters!
Date_max	Earliest proof in absolute calendar years [if only the century/centuries or a certain period is known: fill in the end year/terminus ante quem]; <u>only one number</u> [numeric], no text and no special characters!
Date_pre_1_cent_BC	Dating before 1st century BC documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_1_cent_BC	Dating 1st century BC documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_1_cent_AD	Dating 1st century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_2_cent_AD	Dating 2nd century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_3_cent_AD	Dating 3rd century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_4_cent_AD	Dating 4th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_5_cent_AD	Dating 5th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_6_cent_AD	Dating 6th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_7_cent_AD	Dating 7th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_8_cent_AD	Dating 8th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_9_cent_AD	Dating 9th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_10_cent_AD	Dating 10th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_11_cent_AD	Dating 11th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_12_cent_AD	Dating 12th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_13_cent_AD	Dating 13th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_14_cent_AD	Dating 14th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_15_cent_AD	Dating 15th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_16_cent_AD	Dating 16th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_17_cent_AD	Dating 17th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_18_cent_AD	Dating 18th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_19_cent_AD	Dating 19th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_20_cent_AD	Dating 20th century AD documented; <u>yes/no/assumed</u> [thesaurus obligatory]
Date_secure	Dating quality/reliability: <i>highly reliable</i> (archaeometric dating/dendrochronology/14C, clear dates in written sources...), <i>reliable, uncertain, very uncertain</i> [thesaurus obligatory]

Date_text	Descriptive text about the dating (what is dated, how was it dated, how reliable is the date, how reliable is the context...); you can fill in "fuzzy" dating information here, if the dating is very uncertain, for example a roman or early medieval date is assumed without further details
Ref_hist	Historic/written source, which contains information about the specific harbour; if possible with information about the author (e.g. Einhard, Vita Caroli Magni/Das Leben Karls des Großen)
Ref_mod	Modern references/bibliography, which contains crucial information about the specific harbour; fill in at least a short title/lemma with the authors name and the year of publishing; if possible, please fill in the full title to every short title/lemma in the sub-table "References". For unpublished data/archivalia please add a clear reference such as "unpubl. material/documents from museum XY".
Comments	Comments to the dataset, additional information; free text
Punctuation/ Separators	If multiple entries are necessary in a specific field: separate alternatives/synonyms with a forward slash "/"; separate rival entries or entries of multiple sources/references with a semicolon ";". The comma "," only divides longer entries and is not allowed to be used as a separator!

Thesauri

This terminology is provided as a tool for systematic data entry in the data sheets of HARE. It has been developed in the framework of SPP 1630 "Harbours". The terminology and definitions are based on the German harbour terminology provided by the working group "Terminology" in SPP 1630 [(J. Daum/I. Eichfeld et al.) with contributions from Julia Daum, Marion Foucher, Sven Kalmring, Lars Kröger, Natascha Mehler, Manuela Mirschenz, and Johannes Preiser-Kapeller). It has been reduced, simplified and regrouped thematically based on the pre-existing structure of HARE, which allows for smooth data migration and easy data entry. The English terminology has been provided by Lukas Werther, Thomas Engel, and Nina Korbel using (and referring to) existing thesauri such as Getty. Please help us improve this terminology in version 1.1. Please contact us in case of mistakes, questions, and ideas.

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Place_type_general

Grobe Einordnung des beschriebenen Ortes [\[Thesaurusbindung\]](#)

General definition of the place described [\[thesaurus obligatory\]](#)

Term DE	Term EN	Definition SPP 1630	Definition extern
Hafen <i>[beinhaltet Ankerplatz, Fähranleger, Start-/Endpunkt eines Transports per Schiff aus hist. Quellen]</i>	Harbour <i>[including anchorages, ferry harbours, start and end points of transport by ship in written sources]</i>	An einem Ufer gelegener Ausgangs- und/oder Endpunkt für die Schifffahrt. In der Regel handelt es sich um Bereiche, die aufgrund natürlicher und/oder baulicher Anlagen besonderen Schutz bieten. <i>Starting and/or terminal point of waterways at a shore. Usually areas with natural and/or edificial constructions in terms of protection.</i>	
Kanal/Schleppstrecke <i>[Synonym: portage]</i>	Canal/portage	Anthropogen hergestellter Wasserlauf zur Schaffung einer Wasserstraße. <i>Man-made watercourse to create a navigable waterway.</i>	

Wasserstraße <i>[v.a. für hist. Quellen, z.B. Beleg für Schifffahrt auf Fluss xy, aber keine konkrete Hafenlokalität]</i>	Waterway <i>[especially for written sources, e.g. proof for navigation on a certain river without a specific harbour locality]</i>	(Regelmäßig) Befahrene Verkehrsrouten der See- und Binnenschifffahrt. <i>(Frequently) Used traffic route in maritime and inland navigation</i>	
Wasserfahrzeug	Vessel	Alle Arten von Wasserfahrzeugen. <i>All kinds of vessels.</i>	
Sonstiges	Other	Alle anderen Einrichtungen/Objekte. <i>All further facilities/items.</i>	

Place_technique

Hafenterminologie bautechnisch spezifiziert; Mehrfachnennungen möglich [[Thesaurusbindung](#)]

Harbour terminology in matters of construction/building technique; multiple entries possible [[thesaurus obligatorily](#)]

Term DE (Abb.1)	Term EN (Fig. 1)	Definition SPP 1630	Definition extern
Zentrale bautechnische Termini	Constructive key termini		
Anleger <i>[Synonym: Anlegestelle; Sammelbegriff für Kai, Mole, Brücke, Pier, Steg usw.]</i>	Landing <i>[general term for quay, wharf, jetty, pier]</i>	Einrichtung im Wasser, an der Schiffe schwimmend heranfahren und festmachen können. <i>Installation in the water to moor afloat.</i>	IHO
Kaianlage <i>[Antonym: Schiffslände]</i>	Quay	Künstlich errichtete Anlagen, die ein schwimmendes Anlegen ermöglichen. <i>Artificial construction to moor afloat.</i>	
Kaimauer <i>[Synonym: Kai]</i>	Quay wall <i>[built on fill];</i> Wharf <i>[built on piles]</i>	Künstlich errichtete Anlage, die parallel zum Ufer verläuft. <i>Artificial construction to moor afloat, parallel to the shore, built on fill (quay wall) or piles (wharf). Use "Quay wall/ wharf" when no detailed information about the construction.</i>	Getty
Landebrücke/Pier <i>[Synonym: Schiffbrücke]</i> a, Landebrücke/Pier auf Stützen b, Landebrücke/Pier mit massivem Unterbau	Pier/jetty a, pier/jetty on piles b, pier/jetty on fill	Künstliche errichtete Holzkonstruktionen, die rechtwinklig vom Ufer in tieferes Wasser führen, Anlegen längs und/oder an der Stirnseite möglich. Auf hölzernem Unterbau <i>[auf Stützen]</i> oder Dämmen <i>[auf massivem Unterbau/Aufschüttung]</i> , <i>Artificial wooden [on piles] or damlike [on fill] construction to moor afloat, rectangular to the shore into deeper water.</i>	IHO, IHO
Mole	Mole	Dammartige Bauwerke mit Verbindung zum Ufer zum Schutz eines Hafens oder einer Hafeneinfahrt gegen Wellen, Strömung und Versandung. <i>Damlike construction connected to the shore, protection of the harbour or the harbour entrance against waves, currents or sedimentation.</i>	Getty

Wellenbrecher	Breakwater	Zum Auffangen der Seegangsenergie und für die Schaffung einer Zone des Wellenschattens zum Schutz der Schiffe im Hafen, ohne Verbindung mit dem Ufer. <i>Protections against waves, offshore, without connection to the shore.</i>	IHO
Schiffslände <i>[Synonym: Bootslände, Landestelle, Landeplatz, Lände, Hude; Antonym: Kaianlage; beinhaltet Tidehafen, da nur andere Gewässeranbindung]</i>	Landing place <i>[synonym hythe, landing site]</i>	Einfacher Landeplatz ohne künstliche Ausbauten. <i>Simple landing without artificial installations.</i>	Getty
Schiffslände mit festem Zugang / Einbauten	Landing place with installations	Schiffslände mit künstlichen Ausbauten, die u.a. dem verbesserten Zugang dienen. <i>Landing with artificial installations, among others, to improve the access.</i>	
Uferbefestigung <i>[Synonym: Faschine; Uferanbefestigung; Ufersicherung; Uferschutz; Uferverbau, Schlachte; Funktion ggf. unklar]</i>	Bank revetment	In der Regel parallel zum Ufer verlaufende, vertikale oder liegende Konstruktion (z.B. → Faschine) zur Fixierung des Sediments oder gegen die Beschädigung des Gewässerufers. <i>Bank parallel construction to stabilize the bank.</i>	
Weitere bautechnische Termini	Other constructive termini		
Ponton <i>[Synonym Schiffsbrücke, Schwimmsteg]</i>	Pontoon	Schwimmender Hohlkörper, vorwiegend zum Anlegen v. Schiffen od. als Arbeitsplattform.	IHO
Kanal	Canal	Anthropogen hergestellter Wasserlauf zur Schaffung einer Wasserstraße (hier als Nebenelement, ansonsten unter Place_type_general), auch zur Wasserzu- oder -ableitung. <i>Man-made watercourse to create a navigable waterway, further used for supply with/or discharge of water.</i>	Getty
Ankerstein <i>[Synonym: Vertäuungsstein]</i>	Anchorstone	Ein mit mindestens einem Loch versehener Stein, welcher fest in die Kaianlage oder Mole verbaut ist und dem Vertäuen von Schiffen dient. <i>A stone with at least one hole, which is integrated in the quay or mole and used to anchor ships.</i>	
Schlenge	Floating barrier	Einfacher, niedriger Ponton zum Anlegen und Festmachen für Boote in Tidengewässern oder schwimmende, bewegliche Absperrung. <i>Basic, low pontoon to land or fasten boats in tidal waters, or as a swimming, transportable blockage.</i>	
Slip	Boat slip	Schiefe Ebene (z. B. auf Werften), um Boote an Land zu ziehen oder ins Wasser zu lassen. <i>Inclined plane (e.g. at shipyards), to pull boats ashore or launch them.</i>	IHO ; Getty

Schiffsspezifische Termini	Ship-specific termini		
Floß	Raft	Schwimmende Plattform aus z. B. Baumstämmen. <i>Swimming platforms, made from e.g. trunks.</i>	Getty
Plankenfahrzeug	Planked vessel		
Einbaum	Logboat		
Mischform Einbaum/ Plankenfahrzeug	Extended logboat		
Flachbodenfahrzeug/Prahm	Flat bottomed vessel		
Kieffahrzeug	Keelboat		
Sonstiges Fahrzeug	Other water vessel		
[z.B. Textilbespannung o.ä.]	[e.g. with textile shell]		
Fahrzeugteile	Boat/ship parts		
[z.B. Paddel, Ruder, Tauwerk, Segel]	e.g. paddles, rows, ropes, sails]		

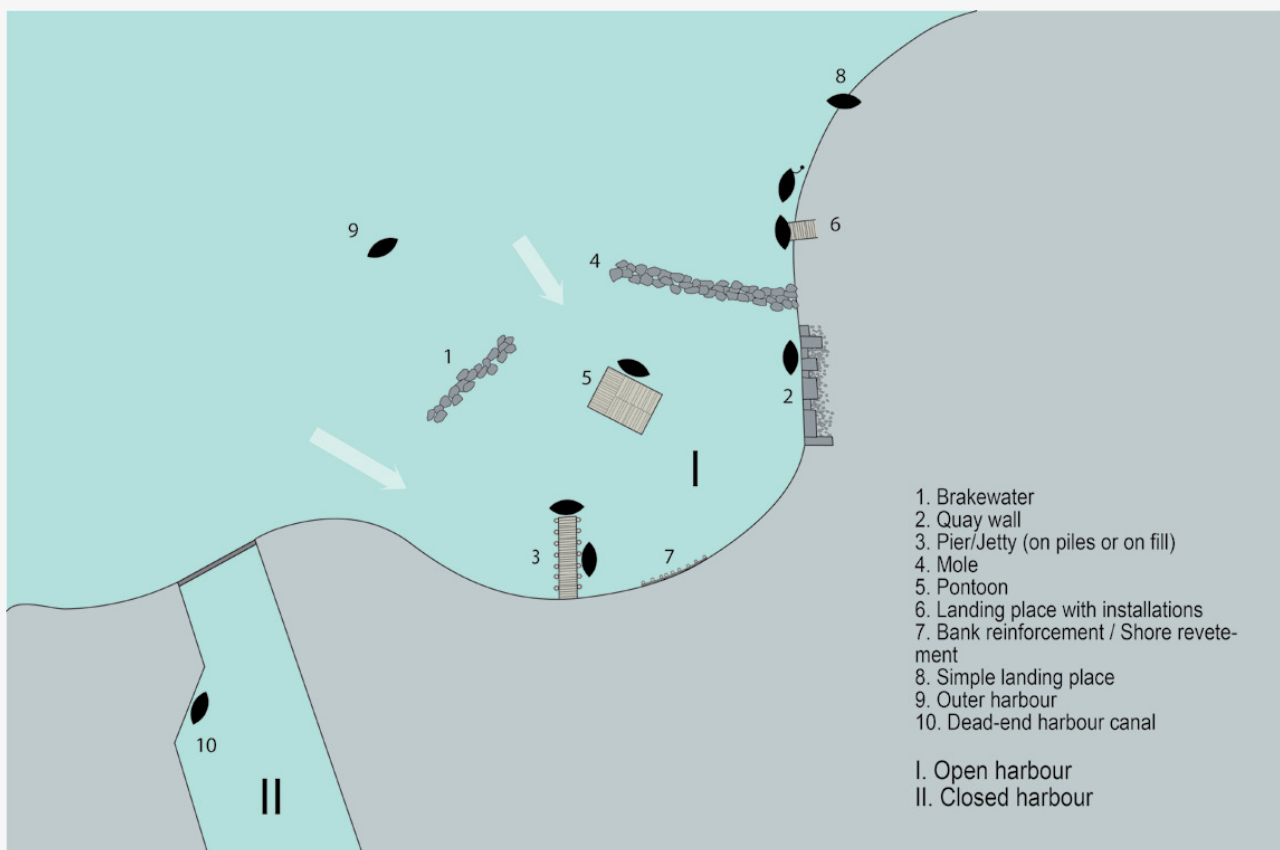


Abb. 1/ Fig. 1. Hafenterminologie bautechnisch spezifiziert / *Harbour terminology in matters of construction*

Place_topography

Topographische Lage des Hafens; Mehrfachnennungen möglich [[Thesaurusbindung](#)]

Topographic position of the harbour; Multiple entries possible [[thesaurus obligatory](#)]

Term DE (Abb.2)	Term EN (Fig. 2)	Definition SPP 1630	Definition extern
Zentrale topographische Termini	Main topographic terms		
Seehafen <i>[Antonym: Binnenhafen; Sammelbegriff]</i>	Sea harbour/port <i>[antonym: inland harbour; general term]</i>	Ein Hafen, der von seegängigen Schiffen angelaufen werden kann, i.d.R. an der Küste gelegen <i>A harbour for seagoing ships, usually on the coast</i>	Getty
Binnenhafen <i>[Antonym: Seehafen; Sammelbegriff]</i>	Inland harbour <i>[antonym: sea harbour/port; general term]</i>	Anlagen für den ruhenden Schiffsverkehr an einem Binnengewässer. <i>Construction for stagnant navigation at inland waters.</i>	Getty
Flusshafen	River harbour	Topographisch an einem Fluss gelegener Hafen. An einem Flussufer gelegene Stelle, die dem Ein- und Aussteigen von Personen sowie dem Ein- und Ausladen von Waren bzw. ganz allgemein dem ruhenden Schiffsverkehr dient. <i>Harbour, which is topographically situated on the banks of a river. Used for embarking and exiting a boat, loading, and discharging of cargo or generally to serve stagnant navigation.</i>	IHO
Binnenseehafen	Lacustrine harbour	Topographisch an einem Binnensee gelegener Hafen. <i>Harbour, which is topographically situated at lacustrine bodies of water.</i>	Getty
Flussmündungshafen	River mouth harbour	Topographisch an einer Flussmündung gelegener Hafen, von See und Fluss aus erreichbar. <i>Harbour, which is topographically situated at a river mouth; can be reached by both sea and river.</i>	IHO , Getty
Binnenhafen an Zusammenfluss	Confluence harbour	Topographisch am Zusammenfluss von mehreren Binnengewässern gelegener Hafen. <i>Harbour, which is topographically situated at a confluence of two or more inland waterways.</i>	Getty
Inselhafen	Island harbour	Topographisch auf einer Insel gelegener Hafen. <i>Harbour, which is topographically situated on an island.</i>	IHO
Tidehafen	Tidal harbour	Natürlicher Hafen ohne feste Einbauten im Wattenmeergebiet, der Schiffen mit flachem Boden ohne Kiel das Trockenfallen ermöglicht. <i>A natural harbour without permanent constructions in an area affected by the tides, which allows ships with a narrow bottom (without keel) to fall dry.</i>	IHO

Lagunenhafen	Lagoonal harbour	Hafen in einer von der offenen See abgetrennten und dadurch geschützten Zone mit Salz- oder Brackwasser. <i>Harbour in an enclosed and therefore protected area of salt or brackish water, separated from the open sea.</i>	Morhange/ Marriner <i>et al.</i> 2017; IHO
Fjordhafen	Fjord harbour	Hafen in einem Fjord, einem langen und schmalen Meeresarm, der zwischen steilen Ufern oder Klippen verläuft. <i>Harbour in a fjord, a long narrow arm of the sea, running up between high banks or cliffs.</i>	IHO
Kanalhafen	Canal harbour	Hafen in einem Kanal, Nutzung der Kanalflanken und/oder des Kanalendes zum Anlanden der Schiffe. <i>Harbour on a canal, which uses the sides and/or the end of a canal to moor a ship.</i>	
Hafenbecken	Harbour basin	Mehrseitig umschlossener Teil der Wasserfläche eines Hafens <i>Water body at a harbour, which is enclosed on several sides.</i>	de Graauw 2016, 10
Ankerplatz [Synonym: Reede; Liegestelle]	Anchorage	Platz an dem Schiffe sicher liegen können, entweder an Land gezogen, ankernd in flachen Gewässern oder vertäut. Künstliche Strukturen oder permanente Siedlungen müssen nicht vorhanden sein. Oft nur saisonal oder in Notzeiten genutzt. <i>Area, in which vessels can safely lie, either pulled ashore, anchored in narrow water or moored. Artificial structures or permanent settlements are not required to be present. Often used seasonally or in times of need.</i>	IHO , Getty
Natürliches Hindernis für die Schifffahrt	Natural obstacle for navigation	Natürliche Hindernisse für die Schifffahrt, z.B. Katarakte, Klippen, Untiefen oder Strudel/ gefährliche Strömungen [Wenn unabhängig von Hafenlokalität: Place_type_general „Sonstiges/ other“]. <i>Natural obstacle for navigation, e.g. cataracts, cliffs, shoals, or whirls/dangerous flows [If independent of a harbour location: Place_type_general „Sonstiges/other“].</i>	
Weitere topographische Termini	Other topographic terms		
Offener Hafen [Antonym: Geschlossener Hafen]	Open harbour [permanent access; antonym: closed harbour/ dock]	Hafen mit zur anschließenden Wasserstraße ständig ausgespiegelten Wasserständen <i>Harbour with water levels, which mirror those of the attaching watercourse</i>	
Geschlossener Hafen [Synonym: Dockhafen; Antonym: Offener Hafen, Tidehafen]	Closed harbour/ dock	Hafen, der keinen unmittelbaren Zugang zum Gewässer hat, sondern durch eine Schleuse oder ein Dockhaupt/Docktor von diesem getrennt ist. <i>Harbour, which has no direct access to waters, but is separated by a watergate or a dock sill.</i>	Getty

Molenhafen	Harbour basin separated by a mole	Durch eine Mole vom offenen Gewässer separiertes Hafenbecken. An Flüssen ist der M. ein Parallelhafen, der gegen die Wasserstraße durch einen parallel zum Ufer verlaufenden Trenndamm abgegrenzt ist, um die liegenden Schiffe vor Wasserbewegungen und dem Einfluss des durchgehenden Verkehrs zu schützen. Der Begriff wird vorwiegend bei Binnenhäfen verwendet <i>Harbour basin separated from open water by a mole. At rivers, the harbour basin separated by a mole is a parallel harbour, which is marked-off from the waterway by a divide dam parallel to the shore: this is to protect moored ships from water movement and constant traffic. This term is primarily used with inland harbours.</i>	
Parallelhafen [Fluss]	Parallel harbour [riverine]	Direkt am Fahrwasser befindlicher, parallel zum Ufer verlaufender Flusshafen. Der P. verfügt generell über eine Steilkante, an der Schiffe schwimmend anlegen können. Dabei kann es sich um eine natürliche Formation oder einen künstlich errichteten Kai handeln <i>River harbour parallel to the bank, which is situated directly at the fairway. The parallel harbour has a steep bank, which is used to land vessels afloat. This can be a natural formation or an artificially constructed quay.</i>	
Vorhafen	Outer harbour	Ein geschützter Bereich vor dem eigentlichen Hafen, in dem Schiffe Ankern und auf Reede liegen können. <i>Protected part of the harbour where vessels can anchor and lie in the roads.</i>	IHO
Stichhafen	Dead-end harbour canal	Künstlich angelegte Abzweigung von einem Flusslauf. Diese Form des Flusshafens soll dazu dienen, dass der ruhende Schiffsverkehr den laufenden Schiffverkehr nicht behindert. <i>Artificially constructed branch of a river course. This type of river harbour is supposed to keep the inactive traffic from disturbing the active navigation.</i>	
Geestrandburg	Geestrandburg	Auf der küstennahen Geest an der Schnittstelle von überregionalen Land- und Wasserwegen gelegene Befestigung, oft in der Nähe von Siedlungen, in denen Handel und spezialisiertes Handwerk betrieben wurden. <i>Structure at the interface of interregional overland routes and waterways at the geest close to the shore, often in close proximity to a settlement in which trading and specialised craft activities take place.</i>	
Gewerbewurt	Gewerbewurt	Sich im Frühmittelalter entwickelnder Siedlungstyp in der Küstenmarsch der Nordsee. Anthropogen erhöhte Siedlungen (Wurten) mit einer auf Handel und spezialisiertes Handwerk ausgerichteten Wirtschaftsstruktur <i>Settlement type emerging in the Early Middle Ages in the marsh of the North Sea. Artificially elevated settlements (wharf/terp) with an economic structure aimed towards trading and specialized craft activities.</i>	

Langwurt	Langwurt	<p>Sich im Frühmittelalter entwickelnder Siedlungstyp in der ostfriesischen Küstenmarsch der Nordsee. Namengebend für diese anthropogen erhöhten Siedlungen (Wurten) ist ihre langgestreckte Siedlungsstruktur, die aus der Lage an einem schiffbaren Priel mit Verbindung zur Nordsee resultiert. Traditionell als Handelssiedlung interpretiert. Aufgrund des unsicheren Zusammenhangs zwischen Siedlungsstruktur und wirtschaftlicher Ausrichtung ist für sicher gewerblich ausgerichtete Wurten der Begriff Gewerbewurt vorzuziehen</p> <p><i>Settlement type emerging in the Early Middle Ages in the East Frisian marsh of the North Sea. This artificially elevated settlement (wharf/terp) is named after its elongated structure, which results from the position at a navigable tideway with a connection to the North Sea. Traditionally seen as a settlement used for trading. Because of the uncertain context between settlement structure and economical orientation, the term Gewerbewurt should be used for wharfs/terps, which certainly had an commercial focus.</i></p>	
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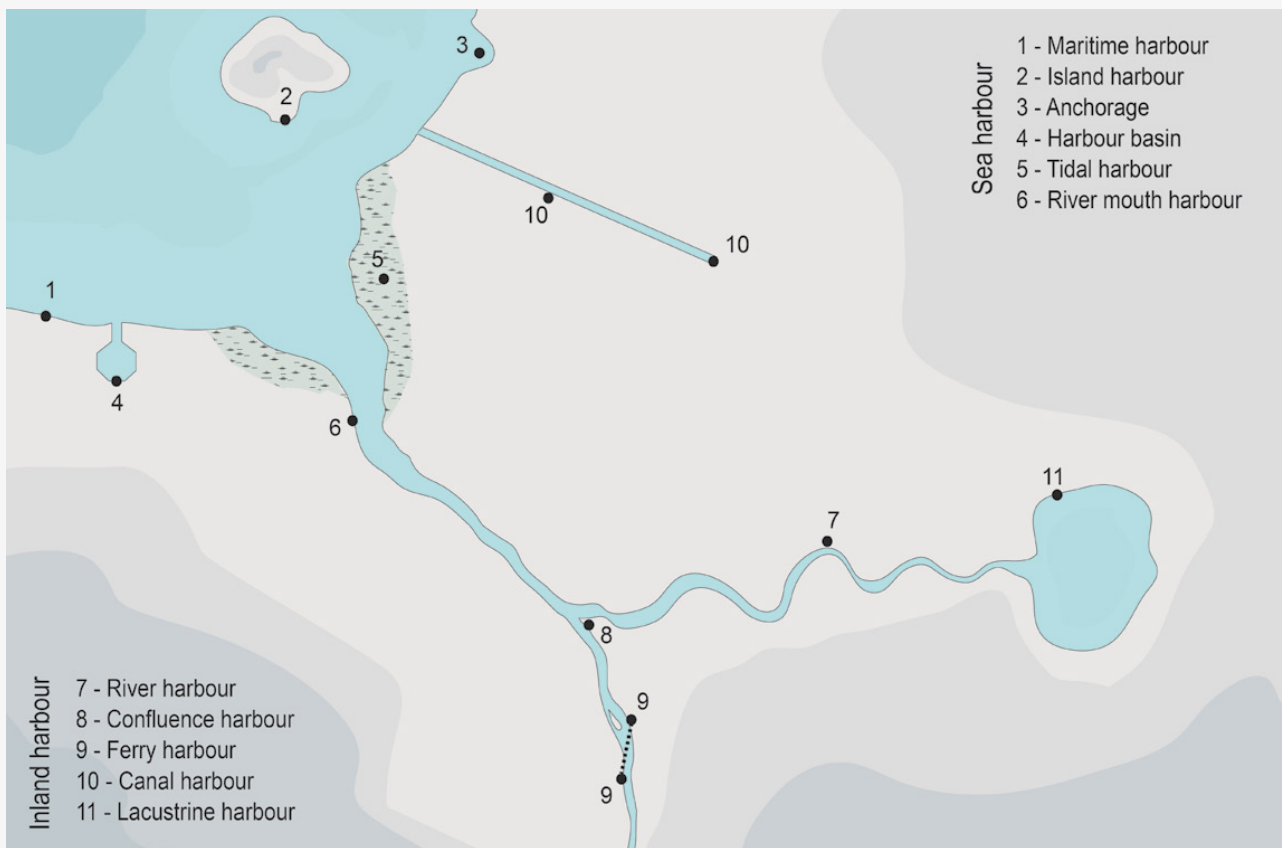


Abb. 2 / Fig. 2. Topographische Lage des Hafens / *Topographic position of harbours.*

Place_infrastructure

Hafentechnische und ergänzende Einrichtungen; Mehrfachnennungen möglich
[\[Thesaurusbindung\]](#)

Infrastructure for harbour operation and additional facilities; Multiple entries possible [\[thesaurus obligatory\]](#)

Term DE	Term EN	Definition SPP 1630	Definition extern
Zentrale infrastrukturelle Termini	Central infra-structural terms		
Werft	Shipyard	Platz für die Konstruktion und Reparatur von Booten und Schiffen. <i>Area used for the construction and repair of boats and ships</i>	IHO , Getty
Hafenkran	Dockside crane	Einrichtungen für den Lade- und Entladebetrieb <i>Installations for charging and discharging.</i>	
Bootshaus	Boathouse	Unterstand für Schiffe gegen Wiedereinflüsse im Winterhalbjahr sowie als Lagerplatz für Schiffsausrüstung und möglicherweise von Handelsgütern. <i>Shelter for vessels against weather effects during the winter and as a storage location for ship equipment as well as trade goods.</i>	Getty
Slip <i>[Synonym: Helgen, Helling]</i>	Boat slip	Zum Wasser geneigte Ebene, auf der Schiffe gebaut und zu Wasser gelassen werden <i>Level, which is inclined towards the water, and used to build and launch ships</i>	IHO , Getty
Leuchtturm	Lighthouse	Architektonisch geformte Seezeichen, die die Einfahrten von Häfen oder gefährliche Küstenabschnitte markieren. <i>Architectural navigation marks that flag the entrances of harbours or dangerous parts of the coast</i>	Getty
Lager- /Speicherbauten	Storehouse	Bauten zum Lagern unterschiedlicher Güter, oft in Hafennähe. <i>Buildings for storing various goods, often close to a harbour</i>	Getty
Schiffervereinigung <i>[nautae u.a.]</i>	Corporation of boatmen/guild <i>[e.g. nautae]</i>	Vereinigung/Zusammenschluss von Schiffen, meist regional organisiert. <i>Association of boatmen, usually organised in a regional manner.</i>	
Flussübergang	River crossing	Übergang über einen Fluss, meist Furt/ Fähre oder Brücke, Sammelbegriff. <i>Passage over a river, usually a ford/ferry or bridge; this is a collective term.</i>	Getty
Brücke	Bridge	Übergang über einen Fluss durch eine Brücke <i>[Steinbrücke, Holzbrücke, Schiffsbrücke/Schwimmbücke]</i> . <i>River crossing, which is a bridge [stone bridge, wooden bridge, pontoon bridge].</i>	Getty
Furt	Ford	Flacher Bereich eines Flusses, an dem dieser ohne Wasserfahrzeug überquert werden kann. <i>Narrow section of a river where it can be crossed without a vessel.</i>	Getty

Verbindung mit wichtiger Straße/Landweg	Connected to important terrestrial route/road		
Weitere infrastrukturelle Termini	Other infra-structural terms		
Dalbe <i>[Duckdalbe, Vertäudalbe; Reibepfahl]</i>	Dolphin	Pfahl oder Pfahlbündel im Wasser, zum Festmachen von Schiffen . <i>Pole or group of poles in the water where a ship can be attached.</i>	
Vertäuungspfähle am Ufer	Mooring pole	Pfähle am Ufer, zum Festmachen von Schiffen. <i>Poles at the shore where a ship can be attached.</i>	
Poller/Kreuzholz <i>[Festmacheinrichtungen]</i>	Bollard/belayer	Ein kurzer Pfahl oder eine pfahlstumpartige Vorrichtung zum Festmachen von Schiffen mit Trossen oder Tauen, z.B. an Kais oder Landebrücken. Steht an Land, im Gegensatz zur Dalbe, die im Wasser steht. <i>A short pole or something similar used to tie ships up with ropes, e.g., at quays or piers. On land, in contrary to a dolphin, which is located in the water.</i>	Getty , IHO
Boje/Bake/Tonne	Buoy	Am Grund verankerter Schwimmkörper, z. B. zum Festmachen von Booten oder Schiffen oder als Markierung für den Anker (Ankerboje). <i>Floating body anchored in the ground, e.g. used to tie boats or ships to or as a marker for the anchor (anchor buoy).</i>	IHO
Reibholz	Fender	An Wasserfahrzeugen und Kaianlagen angebrachte (fest oder lose) Scheuerleiste oder Fender zum Schutz von Bordwand und Hafenanlage. <i>(Fixed or loose) Rubbing strake attached to vessels or quays to protect a ship's side and the harbour installation.</i>	RGZM
Varde <i>[Synonym: Steinmännchen]</i>	Cairn	Norwegisch: Steinmännchen, Seezeichen als Navigationshilfe zum Auffinden und Einfahren in den Hafen. <i>Norwegian: stone manikin, navigation mark to help find and enter a harbour.</i>	IHO
Vorr <i>[Shetland: virr]</i>	Vorr	Norwegisch: Eine oder zwei Steinreihen, die eine Slippe begrenzt, meist außerhalb eines Bootshauses. In der Rampe dazwischen wird das Boot hochgezogen. <i>Norwegian: one or two stone alignments, which border a slip, usually outside of a boathouse. On the ramp between, a boat can be lifted.</i>	
Baumhaus	Baumhaus	An Hafeneinfahrt. Durch Baumhäuser konnte bei Nacht oder bei einer drohenden Gefahr mit Hilfe eines Baumstammes beziehungsweise einer Hafenkette die Einfahrt in die Häfen gesperrt werden. Auch eine zollrechtliche Bedeutung wird erwogen. <i>At the entry of a harbour. A Baumhaus could be used at night or in the face of an imminent danger to block the entrance to the harbour, with a tree trunk or a chain. A connection to tolls has been discussed too.</i>	

Hafenpalisade	Harbour palisade	Verteidigungsanlage zum Schutze des Hafens gegen Angriffe; Begrenzung eines gesonderten Rechtsraumes mit Schutzherrn und Handelszöllen. <i>Defense to protect a harbour against attacks; Border of a separated judicial area with a patron and tolls.</i>	Getty
Sperrwerk <i>[Synonym: Seesperrwerk, Sperrwerk, Pfahlsperre]</i>	Barrage	Quer zum Seeweg Verteidigungsanlage zur Kontrolle des Seewegs inkl. Erhebung von Handelszöllen. Uferparallel zur Befestigung von Flottenstützpunkten an Seewegen. <i>Defence facility crossing a sea route to control it, including the collection of tolls. Bank-parallel to protect naval bases on a sea route.</i>	cf. Grøn/Nørgård Jørgensen 1997
Wippe	Derrick/davit	Einrichtung für den Lade- und Entladebetrieb, die den Warenumsatz zwischen Hafenanlagen und Frachtschiffen ermöglicht. Wippen entwickelten sich aus der Verwendung der Rah der Fahrzeuge als Ladebaum, die sich mit Hilfe der Brassen kippen und schwenken ließ. <i>Installations for charging and discharging, which allows cargo handling between docks and cargo ships. Derricks/davits emerge from the usage of the vessel yard as derrick boom, which could be moved with help of the brace.</i>	Getty , Getty
Treidelweg	Tow path		Getty
Schleuse/Wehr	Sluice	Anlage zum Heben oder Senken von Wasserfahrzeugen durch Füllen oder Leeren einer Schleusenkammer / Stauanlage zur Kontrolle des Zu- oder Abflusses eines Fließgewässers. <i>Installation to lift and lower vessels by filling or emptying a lock chamber / dam to control the in- and outflow of a watercourse.</i>	IHO
Fischereieinrichtung	Fishery	Ortsfeste oder teilmobile Einrichtungen der Fischerei [<i>Fischwehre, Reusen, Becken u.a.</i>] <i>Stationary or partially mobile installations used for fishing activities [weirs, fish traps, basins, and others].</i>	Getty
Wassermühle	Water mill	Mit Wasserkraft betriebene Mühle am oder auf/im Fluss [<i>Wassermühle, Bootsmühle u.a.</i>] <i>Mill powered by hydraulic energy at or on/in a river [water mill, ship mill and others].</i>	Getty
Damm <i>[u.a. Flusseiteendamm, Leitdamm]</i>	Dam	Aufschüttung unterschiedlicher Funktion zur Kontrolle des Wasserflusses <i>Embankment of various functions to control the water flow.</i>	Getty

Place_function

Verwendungszweck des Hafens; Mehrfachnennungen möglich [Thesaurusbindung]

Function and purpose of the harbour; multiple entries possible [thesaurus obligatory]

Term DE	Term EN	Definition SPP 1630	Definition extern
Zentrale funktionsspezifische Termini	Central function-specific terms		
Handelshafen [beinhaltet Exporthafen u.a.]	Commercial/ trade harbour	Verwendungszweck: Umschlag von Handels Gütern <i>Purpose: movement of traded goods.</i>	
Kriegshafen	Naval base	Verwendungszweck: Stationierung von Flotten. <i>Purpose: deployment of fleets.</i>	Getty
Start-/Endpunkt eines Transports per Schiff (aus hist. Quellen)	Origin/destination of transportation by ship [from written sources]	Alle in Schriftquellen dokumentierten Start- und Endpunkte von Transporten per Schiff [Fracht/Passagiere in Place_goods_finds spezifizieren] <i>All starting points and destinations of transport by ship which are documented in written sources.</i>	
Fährhafen	Ferry harbour	Verwendungszweck: Übersetzen von Passanten, Wagen und Großvieh. <i>Purpose: to ferry passengers, vehicles and livestock</i>	
Landeplatz	Landing place [synonym hythe, landing site]	Einfacher Liegeplatz, der sowohl im agrarischen Kontext als auch für spezialisierte ökonomische Ausrichtungen genutzt werden kann. Er unterstreicht die zur Küste hin orientierte ökonomische Struktur des Wirtschaftsraumes. Verwendung primär in maritimem Kontext. <i>Simple berth, which can be used in an agricultural context, as well as for a specific economic purpose. It highlights the economic structure of a region oriented towards the coast. Primarily used in a maritime context.</i>	Getty

Hafenstadt	Port	<p>Stadt mit 1.) Lage am Übergang zwischen Land und Meer bzw. Land und Fluss, einhergehen mit Hafenbecken und spezifische Bauten. 2.) Ort des Überganges zwischen den Räumen „Land“ und „Meer/Fluss“ im Sinne von „gateway cities“. 3.) spezifischer Ökonomie, die durch die Konzentration typischer Berufe konstituiert wird (Umschlag von Waren, Vereinigungen von Schiffseignern, Händlern, Trägern, Fischern, usw.). 4.) eigene, spezifische Kultur, die sich von gleichzeitigen Städten im Binnenland abhebt (Orte des Austausches, Informationszentren u.a.).</p> <p><i>City 1.) Located at a crossing between land and sea or land and river, accompanied by a harbour basin and specific buildings 2.) Located at places of transitioning between the spaces of „land“ and „sea/river“ in the sense of „gateway cities“ 3.) Characterized by a specific economy constituted by a concentration of typical professions (movement of traded goods, association of ship-owners, merchants, carriers, fishermen, etc.) 4.) with its own unique culture, which separates it from coexisting inland cities (trading centers, information hubs, et al.).</i></p>	Getty
Fischereihafen	Fishing harbour	<p>Hafen oder Bereich eines Hafens, der besonders ausgerichtet ist auf Fischerei, Fischverwertung und -versand.</p> <p><i>Harbour or part of a harbour, which is particularly oriented towards fishing, fish processing, and fish distribution.</i></p>	
Umladehafen [Synonym: Transithafen, Umschlagplatz]	Transshipment harbour	<p>Verwendungszweck: Hafen, der nicht Zielpunkt eines (Schiffs-)Transports ist, sondern bloß Zwischenstation. Ein Wechsel des Transportmittels ist im Transithafen möglich, aber nicht zwingend. Je nach Bestimmungsort/ Reiseroute kann potentiell jeder Hafen als Transithafen genutzt werden.</p> <p><i>Purpose: Harbour, which is not the terminal point of a transport by ship, but merely a stop on the route. A change of vehicles is possible, but not mandatory. Depending on destination/ itinerary, every harbour can potentially be used as a transshipment harbour.</i></p>	IHO
Sicherheitshafen	Safety harbour	<p>Verwendungszweck. Hafen zum Schutz vor Stürmen und Wellengang.</p> <p><i>Purpose: Harbour for protection from storms and swell.</i></p>	

Ufermarkt [Synonym: Strandmarkt]	Beach market	Hafen an einem Fluss bzw. am Strand, in dessen direktem Umfeld ein Tausch- oder Handelsgeschehen stattfindet und sich auch spezialisiertes Handwerk einfindet. Teilweise nur saisonale Nutzung. <i>Harbour at a river or beach, close to exchange or trading activities and a venue for specialised craft. Sometimes only seasonal use.</i>	Ludowici/Jöns 2010
Werft	Shipyard	Platz für die Konstruktion und Reparatur von Booten und Schiffen. <i>Area, where ships and boats are constructed and repaired.</i>	IHO, Getty
Schiffahrtsabgabe/Zoll	Water toll/naval duties	Gebühren, die Schiffe für die Benutzung der Leuchtfener, Seezeichen, Fahrwasser, Kanäle, kanalisierten Flüsse, Schleusen und Hafentiegeplätze entrichten. Impliziert meist einen Hafen am selben Ort oder im Umfeld. <i>Fee ships must pay for usage of beacons, navigation marks, fairways, canals, canalised rivers, locks and port berths. Usually implies a harbour in the location or nearby.</i>	Getty
Wasserstraße	Waterway	Regelmäßig befahrene Verkehrsroute der See- und Binnenschiffahrt. <i>Regularly frequented route used for maritime and inland navigation.</i>	Getty
Weitere funktionsspezifische Termini	Other function-specific termini		
Hafenviertel	Dockland/waterfront	Areal innerhalb einer Hafenstadt, das sich aus dem Hafen mit seinen wasser- und landseitigen Einrichtungen sowie dem unmittelbar damit in Bezug stehenden Siedlungsteil zusammensetzt. <i>Area of a port, which consists of the harbour with its water- and landside elements, as well as the part of the settlement, which is immediately related to it.</i>	Getty
Stapelplatz	Staple port	Ursprünglich für quasi natürliche Rast- und Handelsplätze des Fernhandels. Diese gerieten später unter herrschaftlicher Kontrolle, ab dem Hochmittelalter mussten Händler hier halten und ihre Waren zum Verkauf anbieten. <i>Originally used for quasi-natural resting places and trading venues of long-distance trade. These areas later fell under control of the ruling, from the High Middle Ages: merchants had to stop there and offer their commodities.</i>	

Schiffsländenburgus	Schiffsländenburgus	Spätromische militärische Festung an Binnengewässern mit Flügelmauern, die senkrecht zur Uferlinie verlaufen und eine Schutzzone zum Anlanden / Aufslippen bilden <i>Late Roman fortress on inland waters with wing walls, which run vertically to the bank and create a protected area for landing ships.</i>	
villa maritima	villa maritima	Villa in Küsten- oder Seeuferlage, die vorrangig der Freizeit und Muße galt und die über Anleger verfügen konnte. <i>Villa on the coast or lake shore, which primarily served spare time and leisure and could offer landing opportunities.</i>	
Schiffsspezifische Termini	Ship-specific termini		
Binnenfahrzeug	Inland vessel		Getty
seegängiges Fahrzeug	Seagoing vessel		IHO
Fähre	Ferry	Fähren dienen dem Übersetzen von Personen, Fahrzeugen, Tieren und Waren an die gegenüberliegenden Uferzonen eines Binnengewässers. <i>Ferries were used to transport people, vehicles, animals, and commodities to the opposite bank of inland waters.</i>	Getty
Transportfahrzeug	Cargo vessel		Getty
militärisches Fahrzeug	Naval ship		Getty
Fischer/Arbeitsboot	Fishing/working vessel		Getty
Rudereinrichtungen	Rowing facilities		
Segeleinrichtungen	Sailing facilities		
Treideleinrichtungen	Towing/hauling facilities		
Paddeleinrichtungen	Paddling facilities		
Stakeinrichtungen	Punting/staking facilities		

Place_goods_finds

Spezifische nachgewiesene Transportgüter und andere spezifische Funde und Material-gruppen; Mehrfachnennungen möglich [Thesaurusbindung]

Proof of specific transported goods and other specific finds and groups of materials; Multiple entries possible [thesaurus obligatory]

Für Ergänzungen bitte orientieren an / For extensions please use:

http://thesaurus.historicengland.org.uk/thesaurus.asp?thes_no=77&thes_name=FISH%20Maritime%20Cargo%20Types%20Thesaurus

Term DE	Term EN	Definition SPP 1630	Definition extern
Fracht	Cargo	Transportierte Güter aller Art. <i>All sorts of goods transported.</i>	HE
Passagiere/Menschen	Passengers/people	Transportierte Menschen/Passagiere aller Art. <i>Transported people/passengers of all sorts.</i>	HE
Nahrung	Food		HE
Fisch	Fish		HE
Wein	Wine		HE
Korn/Getreide	Grain/cereal		HE , HE
Öl	Oil		HE
Salz	Salt		HE
Personen	People		HE
Keramik/Tonwaren	Pottery		HE
Amphoren	Amphorae		HE
Fässer	Barrels		HE
Stein	Stone		HE
Holz	Timber		HE
Stroh/Heu	Straw/hay		HE
Eisen/Erz	Iron/ore		HE , HE
Textilien	Textiles		HE
Glas	Glassware		HE
Militärausrüstung	Military equipment		HE
Ballast	Ballast		HE
Gewichte/Waagen	Weights		
Fischereizubehör [Netzsenker u.ä.]	Fishing gear		HE

Actors_activity

Hafen - und schiffahrtsspezifische Handlungen und Ereignisse sowie spezifische Nutzergruppen; Mehrfachnennungen möglich [Thesaurusbindung]

Harbour - and navigation-specific actions and events, as well as specific user groups; Multiple entries possible [thesaurus obligatory]

Term DE	Term EN	Definition SPP 1630	Definition extern
Bergfahrt [Antonym: Talfahrt]	Upstream navigation		
Talfahrt [Antonym: Bergfahrt]	Downstream navigation		
Treideln	Hauling/towing		
Segeln	Sailing		
Paddeln	Paddling		
Rudern	Rowing		
Staken	Stake/punt		
Schiffbruch	Shipwreck		Getty
Piraterie/Kaperung	Piracy		

Place_hierarchy

Individuelle Experteneinschätzung zur hierarchischen Einordnung und Bedeutung des Hafens bezüglich der Reichweite seiner Bedeutung, der Lage im Hafennetzwerk, der Nutzungsfrequenz und -dauer, des generellen baulichen Aufwandes sowie der räumlichen Verbindung zu Produktions- und Konsumorten sowie Landwegen; Mehrfachnennungen erwünscht [Thesaurusbindung]

Individual expert evaluation concerning the hierarchical order and importance of the harbour revolves around the spatial extent of his connections, his position in the harbour network, the frequency and duration of his use, the general constructive effort, the spatial connection to sites of production and consumption, as well as terrestrial routes; Please use multiple entries [thesaurus obligatory]

Term DE	Term EN	Definition SPP 1630	Definition extern
Globale Bedeutung	Global importance	Hafen oberster Ordnung, Verbindungen in andere Kontinente oder zumindest völlig andere Wirtschafts- und Verkehrsräume [z.B. Ostia/Portus, London, Venedig] <i>Most important harbours, which are connected to different continents or at least different economic and transportation areas [e.g. Ostia/Portus, London, Venice].</i>	

Überregionale Bedeutung	Supraregional importance	Bedeutung über eine einzelne Region/einen Wirtschaftsraum/ein Gewässersystem hinweg [z.B. Haithabu, Lyon, Regensburg] <i>Significance is greater than a specific region / an economic area / a water system [e.g. Haithabu, Lyon, Regensburg].</i>	
Regionale Bedeutung	Regional importance	Bedeutung innerhalb einer größeren Region/eines Wirtschaftsraumes/eines Gewässersystems [z.B. Aschaffenburg, Ingelheim] <i>Important within a larger region / a water system [e.g. Aschaffenburg, Ingelheim].</i>	
Lokale Bedeutung	Local importance	Auf einen Kleinraum oder ein Einzelgewässer beschränkte Bedeutung [z.B. kleiner Landeplatz für Fischer] <i>Valuable only for a small area or a single body of water [e.g. a small fisherman's quay].</i>	
Saisonale/Periodische Nutzung	Seasonal/periodical use		
Permanente Nutzung	Permanent use		
Periphere Lage	Peripheral location		
Zentraler Knotenpunkt	Central node		
Kurzzeitige Nutzung	Short-term use		
Langfristige Nutzung	Long-term use		
Kein Beleg für tatsächliche Nutzung	No proof for actual use		
Aufwändige Hafeninfrastruktur/ Baulichkeiten	Substantial harbour infrastructure/buildings		
Keine aufwändige Hafeninfrastruktur/ Baulichkeiten	No substantial harbour infrastructure/buildings		
Verbindung mit wichtiger Straße/ Landweg	Connected to important terrestrial route/road		
Direkte Verbindung zu wichtigem Produktionsort	Connected to an important productive site		
Direkte Verbindung zu wichtigem Konsumort	Connected to an important consumer site		
Direkte Verbindung zu wichtigem Verwaltungs-/Herrschaftszentrum	Connected to an important center of administration or power		
Direkte Verbindung zu wichtigem religiösem Zentrum	Connected to an important religious center		
Direkte Verbindung zu wichtigem Truppenstandort	Connected to an important military base		

European Harbour Data Repository

Project The Leiruvogur Harbor Research Project.

Interdisciplinary Archaeological Examination of a Viking Harbor and Its Hinterland in Iceland

References

BIBLIOGRAPHY

Byock & Zori 2017: J. Byock & D. Zori, Predictive Models and Historical Sources for Finding a North Atlantic Port: The Leiruvogur Harbour at the Mouth of Iceland's Mosefell Valley. In: S. Kalmring & L. Werther (eds.), Häfen im 1. Millennium AD. Standortbedingungen, Entwicklungsmodelle und ökonomische Vernetzung. Plenartreffen im Rahmen des DFG-Schwerpunktprogramms 1630 «Häfen von der Römischen Kaiserzeit bis zum Mittelalter» an der Friedrich-Schiller-Universität Jena, 19.-21. Januar 2015. RGZM-Tagungen 31 = Interdisziplinäre Forschungen zu den Häfen von der Römischen Kaiserzeit bis zum Mittelalter in Europa 4 (Mainz 2017) 137-157.

Byock et al. 2015: J. Byock, D. Zori, C. von Carnap-Bornheim, S. Kalmring, D. Wilken, T. Wunderlich, W. Rabbel, R. Schneider, D. Höft, S. Shema & K. Schwarzer, A Viking Age Harbor and Its Hinterland in Iceland: The Leiruvogur Harbor Research Project (DFG SPP 1630). In: Th. Schmidts & M. M. Vučetič (eds.), Häfen im 1. Millennium AD. Bauliche Konzepte, herrschaftliche und religiöse Einflüsse. RGZM – Tagungen 22 = Interdisziplinäre Forschungen zu den Häfen von der römischen Kaiserzeit bis zum Mittelalter in Europa 1 (Mainz 2015) 289-312.

Eldjárn 1981: K. Eldjárn, Leiruvogur og Þerneyjarsund: Staðfræðileg athugun. Árbók hins íslenska fornleifafélags, 1980 (1981), 25-35.

Höft 2013: D. Höft, Investigation of salt marsh sediments in the Leruvogur Bay, 2013 [unpubl. report, Vikingaminjar Research Institute, Reykjavík 2013].

Kalmring 2013: S. Kalmring, The Leiruvogur Harbor Research Project: The 2013 field campaign. Jahresber. Zentrum für Baltische und Skandinavische Arch. 2013, 52-53.

Kalmring & von Carnap-Bornheim 2012: S. Kalmring & C. von Carnap-Bornheim, Das Leirvogur Hafen Forschungsprojekt: Kick-off Meeting in Reykjavík und Feldbegehung auf den Salzwiesen von Leiruvogur. Jahresber. Zentrum für Baltische und Skandinavische Arch. 2012, 56.

Kalmring & Zori 2014: S. Kalmring & D. Zori, The Leiruvogur 2014 field campaign and the Ship Mound. Jahresber. Zentrum für Baltische und Skandinavische Arch. 2014, 71.

Kalmring et al. 2015: S. Kalmring, D. Zori, C. von Carnap-Bornheim & J. Byock, The Valley and the Harbour Bay. The »Leiruvogur Harbour Research Project« in Southwestern Iceland Concluded. Jahresber. Zentrum für Baltische und Skandinavische Arch. 2015, 68-69.

Wilken et al. 2016: D. Wilken, T. Wunderlich, D. Zori, S. Kalmring, W. Rabbel & J. Byock, Integrated GPR and archaeological investigations reveal internal structure of man-made Skiphóll mound in Leiruvogur, Iceland. Journal of Arch. Scien., Reports 9, 2016, 64-72.

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