Jebat: Malaysian Journal of History, Politics & Strategic Studies
52(1)(2025): 20-50
https://doi.org/10.17576/jebat.2025.5201.02

Ceramic Trade between Quanzhou and the Malay Peninsula from the Eleventh to the Thirteenth Centuries: Based on Chinese Texts and Shipwreck Archaeological Data

WANG FEIRAN, ASYAARI MUHAMAD* & YASMIN AMIRAH MUHAMMAD EDRUS
Institute of The Malay World and Civilization,
Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia
Corresponding author: asyaari@ukm.edu.my

Received: 29 October 2024 Accepted: 18 February 2025

Abstract

Quanzhou, located in Fujian Province on the southeastern coast of China, rose to prominence as an international trading port in the eleventh century, and overseas trade with the Malay Peninsula took on new dimensions. This article takes the development of ceramic trade as an example, combining ancient literature and archaeological reports of shipwrecks containing Minnan (Southern Fujian) porcelain, to analyze the dynamic interaction and the maritime trade between the Quanzhou region with the Malay Peninsula from the eleventh to the thirteenth centuries. This study uses documentary research, archaeological typology, and comparative research. The findings indicate that the open maritime trade policy not only consolidated the vital position of the Quanzhou port on the South China Sea route but also spawned kilns near the port, with the primary purpose of exporting, which significantly increased the proportion of ceramics from the Minjiang River Basin in the overall ceramic trade.

Keywords: Chinese Ceramic; Trade Routes; Quanzhou; The Malay Peninsula; Shipwreck

Introduction

Quanzhou is a prominent example of regional development in Fujian. In 565 AD, Guṇarata, a renowned Indian monk, translated the *Diamond Sutra* at Yanfu Temple on Jiuri Hill in Quanzhou, while waiting for monsoon winds to travel to the Malay Peninsula.[1] This marks the earliest recorded instance of maritime transportation in Quanzhou. During the Tang dynasty, Quanzhou was a small, isolated city with an economy primarily based on local agriculture. Maritime trade in Quanzhou gained prominence during the Five Dynasties and Ten Kingdoms period. During this period, Quanzhou's local leaders established an overseas trade organization named Queliyuan to promote trade and boost revenue.[2] They also sent officials abroad to attract foreign traders. These early developments laid the foundation for Quanzhou's prosperity during the Song and Yuan dynasties.

During the Song and Yuan dynasties, Quanzhou's maritime trade reached unprecedented prosperity, earning it the title of the Largest Port in the East at that time. In 1087 AD, the Shibosi (Maritime Trade Superintendency) was established in Quanzhou, enabling domestic and foreign merchants to travel directly to the city for trade.[3] Consequently, Quanzhou rapidly grew from a small local city to the largest port city in China. In the middle of the Northern Song Dynasty, Quanzhou caught up with, and surpassed Mingzhou (Ningbo), becoming second only to Guangzhou. During the early years of the Southern Song Dynasty, it equaled Guangzhou, and by the end of the Southern Song Dynasty, it had overtaken Guangzhou to become the largest trading port in the country. The Malay Peninsula, such as Dingjialu (Terengganu), Lingyamen (Singapore), Pengkeng (Pahang), Kelantan, and Danmaling (Tambralinga), often traded with Quanzhou.[4] The goods shipped from Quanzhou to

eISSN: 2180-0251

the Malay Peninsula were first sold in places such as Lingyamen for roughly one-third of the total, then shipped to areas such as Sanfoqi (Srivijaya) for sale.[5]

In recent years, some scholars have focused on ceramics transportation issues related to Quanzhou port along the South China Sea trade route. Chinese ceramics, primarily from Fujian kilns, especially those in Quanzhou, were the main cargo of ancient shipwrecks that were discovered in Southeast Asia and the South China Sea. At least 11 shipwrecks from the twelfth to thirteenth centuries have been found, all containing substantial quantities of ceramic products from Fujian, particularly Quanzhou.[6,7] Other scholars have examined the scale of ceramic production in the Quanzhou area. Archaeological surveys and excavations have identified over one hundred kiln sites from the Song and Yuan dynasties, highlighting a large-scale regional ceramic production industry.[8,9] Early kiln sites were mainly located in coastal plains, but later spread to almost all counties in Quanzhou.[10,11] Based on the archaeological records in Malaysia, Song Dynasty goods that have been found consist of celadon and white porcelain from the eleventh to thirteenth centuries.[12]

Despite progress, several key issues remain unresolved in current research. Firstly, although Quanzhou's significance as a major port is well established, the exact relationship between its development and the emergence of kiln sites in the region remains underexplored. Secondly, the stages of development of these kiln sites and their contributions to the region's economic transformation are not well understood. Thirdly, the broader impact of this ceramic trade on international exchange networks between China and the Malay Peninsula remains insufficiently studied. Addressing these issues is essential, as it will offer critical insights into the dynamics of ancient trade and the socio-economic drivers of production in Quanzhou. This will greatly deepen the level of understanding of the archaeological and historical contexts of international trade, particularly the central role of ceramics as a key trade commodity in the ancient world.

This article investigates the ceramic trade between Quanzhou and the Malay Peninsula from the eleventh to thirteenth centuries. The objectives of the research are to examine the origin and distribution of ceramics from Quanzhou kiln sites, analyze their role in the ceramics trade with the Malay Peninsula, and explore the impact of maritime trade policies on this trade's development. Addressing these objectives contributes to broader insights into international trade networks and economic transformations of the period.

Methodology

This study employs four methodological stages: documentary research, archaeological typology research, comparative analysis, and graphical data analysis. The materials selected include ancient shipwrecks containing Minnan porcelains, archaeological evidence from Quanzhou kiln sites, and historical records from the Song and Yuan dynasties. Firstly, historical records from ancient literature were gathered to clarify changes in Quanzhou port, the policy factors influencing these changes, and the history of trade between Quanzhou and the Malay Peninsula during the Song and Yuan dynasties. Next, ceramic artifacts were classified and analyzed using archaeological typology, focusing on physical characteristics such as shape, decoration, and glaze. This method identifies production centers and trade routes, offering a systematic framework to interpret regional and chronological variations in ceramic production. Data were derived from prior studies and archaeological reports. Comparative analysis carried out here involved a cross-verification of historical documents and archaeological data. Finally, the data were visualized using graphical analysis to illustrate patterns of ceramic distribution and changes in trade scale over time.

Quanzhou Location and Kiln Site Distribution

Quanzhou City, anciently known as Citong, is in Fujian Province on the southeast coast of China (Map 1). It is close to the west coast of the Taiwan Strait, across the sea from Taiwan Island, and it enjoys a northeasterly wind in winter and a southeasterly wind in summer. This makes it very convenient for sea vessels from Quanzhou to travel to North Korea and Japan in Northeast Asia, as well as to countries in Southeast Asia. The coastline of Quanzhou is 427 kilometers long, with many bays, wide waters, and deep channels, which are conducive to large ships mooring and sheltering from the wind. At the intersection of the major shipping routes in the South China Sea and the East China Sea, Quanzhou Port is one of the starting points of the Maritime Silk Road. Quanzhou Port is the general name of Three Bays and Twelve Harbours in the Quanzhou area. Three Bays refer to Quanzhou Bay, Shenhu Bay, and Weitou Bay, and Twelve Harbours are distributed in all corners of the north and south coastline of Quanzhou.[13] Among them, Quanzhou Bay is Southern Fujian's main seaport and regional center. It provides abundant deepwater anchorage and a highly developed hinter

Map 1: Location of Quanzhou.
Source: Drawings by Author(s).

From the late Southern Song Dynasty to the early Yuan Dynasty, Quanzhou emerged as the principal port for calculating navigable route distances, travel time, and positioning between China and Southeast Asia, India, Arabia, and North Africa.[14] Since the eleventh century, ceramics have been the bulk commodity in China's foreign trade. The growing demand for Chinese ceramics in overseas markets prompted the rise of numerous kiln factories that imitated famous kilns in the coastal area of Quanzhou, Fujian Province. These small workshops, often modeled after high-quality kilns such as Yue Kiln, Jingdezhen Kiln, and Longquan Kiln,[15] allowed for flexible production organization and

high output. 130 Song and Yuan kilns have been found in the Quanzhou area (Table 1). Nan'an has the largest number of kilns and it is considered the main center in southern Fujian. Dehua and Anxi were also key centers of ceramic production during that period, with these three counties hosting the most kiln sites and producing most of the region's export ceramics. Although Tong'an had fewer kiln sites, it still played a significant role in the industry.[16]

Table 1: Distribution of Kiln Sites in Quanzhou and Proportion of County Population (Households) Involved in Exporting Ceramics in the Late Southern Song Dynasty

County (prefecture)	Kiln sites	Households involved in export ceramics	Number of households (est.)	Proportion (%)
Dehua	33	3,300	18,000	18.3
Anxi	23	2,300	15,000	15.3
Nan'an	47	4,700	60,000	7.8
Tong'an	6	600	14,000	4.3
Yongchun	6	600	15,000	4
Jinjiang	14	1,400	97,000	1.4
Hui'an	1	100	36,000	0.3

Source: So, The Spatial Patterns of the Export Ceramic Industry in Southern Fukien and Kwang-Tung under the Sung Dynasty: A Comparative Study,1997.

Dehua is situated in the mountainous inland area of Quanzhou. The history of porcelain production in Dehua dates from the Late Tang to the Five Dynasties, with the earliest kiln site discovered in the Meihui town of Mulin. During the Song and Yuan periods, Dehua was renowned for its qingbai (bluish-white) wares (Figure 1). This was a type of porcelain characterized by a thin body, white paste, and an evenly applied transparent bluish glaze, as well as white wares.[17] Porcelain production in Dehua was primarily aimed at overseas markets, as evidenced by the abundance of Dehua ware found in ancient shipwrecks and land sites along ancient sea routes. Nan'an kiln is a ceramic kiln of the Song Dynasty, mainly made of green glaze (Figure 2) and qingbai glaze. The glaze color is yellowish green, and the inner wall of the wares is mostly decorated with incised decorations. Anxi, in the upper reaches of the Jinjiang River, and its products during the Song and Yuan dynasties, were mainly qingbai ware and celadon (Figure 3).[18]

Figure 1: Qingbai Ware Collected from the Wanpinglun Kiln, Dehua.
Source: Wan, The Production and Overseas Trade of Dehua Kiln Porcelain in the Song and Yuan Dynasties, 2022.

Figure 2: Celadon Collected from Nankeng Kiln, Nan'an.
Source: : Yang, A Preliminary Discussion on the Production of Song-Yuan Celadon in Fujian and Related Issues, 2016.

Figure 3: Celadon Collected from Guiyao Kiln, Anxi.
Source: *:* Fu, Enfeng and Fu, Baoling, Porcelain collected at Guiyao kiln in Anxi, 2018.

Table 1 also shows estimates of the proportion of the population engaged in exporting ceramics by county. The percentages range from 0.3 percent (Hui'an) to 18.3 percent (Dehua), with the three highest percentages, which are 18.3 percent (Dehua), 15 percent (Anxi), and 7.8 percent (Nan'an). This demonstrates the prominent role that export ceramics played in the local economy. Billy So Kee-long estimated that at the height of the maritime trade, more than 13,000 households in Quanzhou may have been involved in producing and operating export ceramics.[19] This implies that more than 6.5 percent of the population of the Quanzhou area depended directly on the income generated by the industry. The large-scale ceramics production also brought substantial wealth to the region, generating nearly three-quarters of a million strings of cash in annual profits.

According to factors such as color, decoration, body quality, and other stylistic features, ceramics fired in the Song and Yuan kilns in the Quanzhou area can be categorized into four main types: celadon wares, Cizao-colored wares, white wares, and yingqing wares.[20] Celadon was the main Chinese ceramic used during the Song and Yuan dynasties. Those found in the Quanzhou area can be divided into two categories. The first is imitations of Longquan celadon, produced mainly in Jinjiang, Nan'an, and Anxi. The second type of celadon is a group of stoneware bowls decorated with a dotted comb in dark olive green or yellow-green. They originated mainly in Tong'an, and similar wares were fired in kilns in Anxi and other places.[21] Cizao-colored wares were dark glazed earthenware with amber-like colors. Their bodies were initially fired at low temperatures without any glaze. Afterward, they were coated with a lead glaze and fired once more. The resulting colors of these wares typically include dark green, brown, and black, among others. White wares came mainly from Dehua. Its color texture was whiter than that of Jingdezhen white wares, with a creamy glaze, and it also differed from the Ding kiln white wares with a rich ivory tinge.[22] Yingqing wares possess a translucent white body and are covered with a transparent glaze. The glaze itself is greenish white, resembling the appearance of high-fired porcelain. In the Quanzhou area, the wares were mainly produced in Tong'an, Nan'an, Anxi, Yongchun, and Dehua, and these kinds of yingqing wares were probably imitations of the Jingdezhen kilns.[23]

Table 2 displays the locations of the counties where various categories of ceramics were discovered at the kiln sites. Celadon is the most common product of the region, present in about 90 percent of the excavated sites, with yingqing being the second most common ware. In general, kilns in the plains tended to focus more on producing celadon or dark-colored wares, while those in mountainous regions specialized in light-colored yingqing or white wares.[24]

Table 2: Distribution of the Four Categories of Ceramics in Quanzhou During the Song Dynasty

County	Celadon	Colored Ware	White	Yingqing
Jinjiang	*	*		*
Nan'an	*	*		*
Tong'an	*			*
Hui'an	*		*	*
Dehua			*	*
Anxi	*			*
Yongchun	*			*

* Indicates the presence of ceramic categories.

Source: Feng, Major Achievements in Ceramic Archaeology in New China, 1965.

Records of Ceramic Trade between Quanzhou and the Malay Peninsula in Chinese Texts

Due to the lack of early archaeological information, historical records have become an indispensable resource. China's export trade activities were partially recorded in personal traveling notes of the time. These were *Yunlu Manchao*, written by Zhao Yanwei, *Zhufan Zhi*, written by Zhao

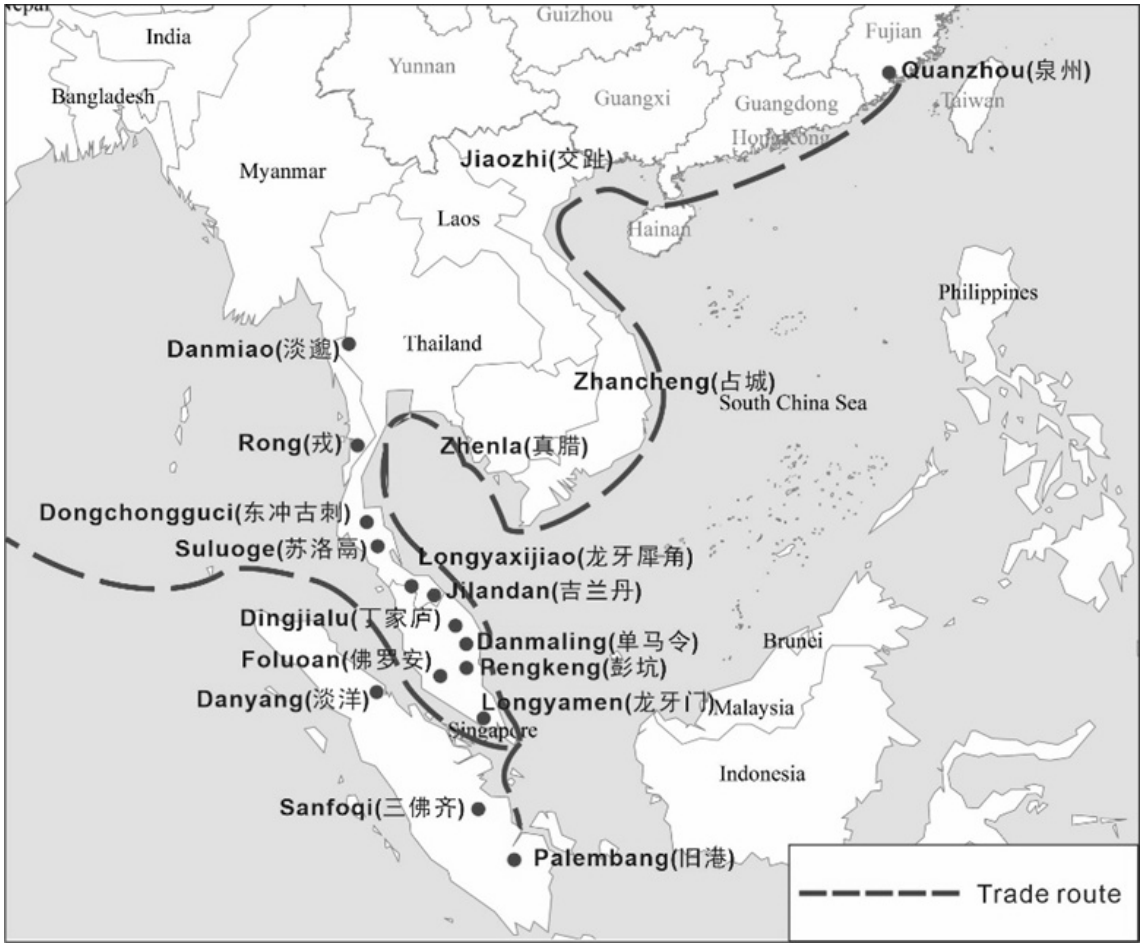
Rukuo, *Pingzhou Ketan*, written by Zhu Yu, *Daoyi Zhilüe*, written by Wang Dayuan, and *Lingwai Daida* written by Zhou Qufei. Records were also within official documents of the Chinese government, such as *Songshi*. In addition, some medieval travelers, such as Marco Polo and Ibn Battuta, also recorded the prosperity of Quanzhou port at that time in their travelogues. These are important written references.

The first Song emperor enacted regulations governing trade in 960 AD. This was the first year of his reign, so the importance of trade was obvious from the start. As early as the beginning of the Song Dynasty, the imperial court had set up Shibosi (Maritime Trade Superintendency) in various coastal ports. In 1072 AD, Xue Xiang, a transit official of Quanzhou, thought that the southeast coast was lucrative, and foreign trade accounted for an important part of it. So, he proposed setting up a Shibosi in Quanzhou, but the proposal was not approved.[25] In 1082 AD, Chen Cheng, the prefect of Quanzhou, once again requested that it be done. It was not until 1087 AD that Quanzhou formally established Shibosi.[26]

Shibosi, the official agency regulating overseas trade, has numerous responsibilities. These include overseeing the entry and exit of ships, assessing goods and collecting tariffs, purchasing government monopolies, issuing certificates to merchants, and safeguarding the welfare of foreign merchants.[27] Before Shibosi was established in Quanzhou, local merchants had to register with other maritime trade superintendencies in Guangzhou or Mingzhou to obtain export licenses. Likewise, foreign merchants needed to stop in Guangzhou or Mingzhou to pay import taxes before proceeding to Quanzhou.[28] These inconveniences and unnecessary costs were eliminated once Quanzhou became an official port for registering for overseas trade.[29] Consequently, the number of foreign merchants who frequented and resided in the region increased substantially.

The Southern Song Dynasty (A.D. 1127-1279) moved its capital to Lin'an (present-day Hangzhou), shrinking the area under its rule. However, the ruler's consumption and military and civilian use continued unabated, resulting in a shortage of funds. Emperor Gaozong of the Song Dynasty was aware of the importance of overseas trade, and as a result, the Quanzhou merchants became more closely associated with Southeast Asia. *Yunlu Manchao*, written in 1206 AD, recorded that Quanzhou merchants were involved in overseas trade in 31 countries, almost all over Southeast Asia.[30] Among them are Sanfoqi, Dengliumei (Nakhon Si Thammarat), Foluoan (possibly Kuala Berang, Terengganu), and Pengfeng (Pahang), belonging to the Malay Peninsula. According to *Zhufan Zhi*, written in 1225 AD, traders who frequented the port of Quanzhou included those from minor Malay ports such as Kuala Berang, Pahang, and Kompei.[3132] Porcelain and silk were the bulk of the goods exported at that time.

Zhao Rukuo recorded the distance, several days, and direction of the route (Map 2) from Quanzhou to the Malay Peninsula, in detail in *Zhufan Zhi*: from Quanzhou, traveling south-west through Guangzhou and the Paracel Islands to Zhancheng (Champa), and then west to Zhenla, turning southeast and sailing to Sanfoqi for five days and nights.[33] Zhancheng is in the center of present-day Vietnam and can be reached in more than 20 days from Quanzhou.[34] From Zhancheng, further south, was Zhenla. Zhenla is in present-day Cambodia and can be reached in more than a month by boat from Quanzhou with a favorable wind.[35] From Zhenla, via the Gulf of Thailand, merchants can arrive at Sanfoqi. In essence, Sanfoqi was a Southeast Asian power in the Song Dynasty, located directly south of Quanzhou. Afterward, traveling west again from Palembang (port of Sanfoqi), crossing the Strait of Malacca, and entering the western Indian Ocean and the Arabian Sea, merchants could travel to Dashi and the east coast of Africa.



Map 2: Trade Routes between Quanzhou and the Malay Peninsula in the Song Dynasty. Source: Drawings by Author(s).

Among them, Sanfoqi had the closest trade with Quanzhou. Hong Mai recorded two stories about Quanzhou merchants shipwrecked on their way to Sanfoqi in *Yijian Zhi.*[36] A stone tablet named *Xiangying Miaoji*, erected in 1138 AD, recorded that folk merchant operated overseas trade: Zhu Fang, a merchant from Quanzhou, went to the temple to pray to the gods for a safe voyage and a hundred-fold profit when he traveled to Sanfoqi by ship. In the middle of the twelfth century, there was evidence that the Sanfoqi community already existed in Quanzhou. In 1178 AD, the fifth year of the Chunxi reign period, emissaries from the Sanfoqi successively came to Quanzhou to bring goods to the Song court, and the port of Quanzhou became the terminus of the tributary countries.[37] In addition, many Sanfoqi merchants went to Quanzhou, and some of them settled in foreign trade ports such as Guangzhou and Quanzhou for a long time, and even married and had children. Lin Zhiqi noted in Volume 16 of *Zhuozhai Wenji* that Quanzhou prefecture is one of the three prefectures managing the South Sea and responsible for taxing mercantile ships.[38] Among the numerous countries trading with Quanzhou was Srivijaya. Many wealthy merchants from Sanfoqi lived in or were born in Quanzhou.

In the thirteenth century, ceramics became a major foreign trade commodity and became more prominent in foreign trade. The goods exported from Quanzhou to the Malay Peninsula were about 50 kinds of goods, and ceramics were an integral part.[39] Southern Song government made efforts to prevent the outflow of coins, and in 1219 AD, which was the twelfth year of the Jiading reign period, they ordered foreign transactions not to pay cash directly but silk, brocade, porcelain, and so on, as

the equivalent of exchange.[40] As a result, merchants from various countries transported commodities, such as spices, medicines, rhinoceros horn, tortoiseshell, and so on to Quanzhou, and then shipped out porcelain, gold, silver, copper coin, silk, and so on from Quanzhou. Zhao Rukuo, in *Zhufan Zhi*, made several references to Chinese merchants trading in porcelain, qingbai porcelain, and celadon porcelain (Table 3) in the Malay Peninsula, in places such as Sanfoqi, Danmaling (Tambralinga), Lingyasijia (Langkasuka), and Foluoan.

Table 3: Types of Commodities Exported from Quanzhou to the Malay Peninsula During the Song Dynasty

Country or Region	Commodity
Sanfoqi (Srivijaya)	Brocade Silk, Tie-dyed Silk, Porcelain
Danmaling (Tambralinga)	Silken Fan, Tie-dyed Silk, Porcelain, Pottery
Lingyasijia (Langkasuka)	Tie-dyed Silk, Porcelain
Foluoan (Kuala Berang)	Porcelain

Source: Zhao, Zhufan Zhi, 1993.

During the Yuan Dynasty (A.D. 1271-1368), the foreign trade of Quanzhou port had a new development than that of the Song Dynasty and had reached an era of great prosperity. *Mengliang Lu* recorded that merchants traveled overseas to do business, which was achieved by departing from Quanzhou.[41] During the Yuan Dynasty, Quanzhou traded with 30 to 40 more countries than in the Song Dynasty, and overseas trade extended as far as the east coast of Africa and the Arabian Peninsula.[42] Ibn Battuta describes Quanzhou as the largest port in the world.[43] All these accounts reflect Quanzhou's position and importance in maritime trade, and the port of Quanzhou has become an essential route for the southeastern region to connect with overseas.

During this period, ceramics were more varied and exported to more countries. According to the record of *Daoyi Zhilüe*, the types of ceramics exported from Quanzhou port to the Malay Peninsula in the Yuan Dynasty and the countries exported (Table 4) are collated. The ceramic varieties were dominated by qingbai and celadon, including the products of some famous kilns, such as the Longquan kiln in Chuzhou, Zhejiang province.

Table 4: Types of Ceramics Exported from Quanzhou to the Malay Peninsula During the Yuan Dynast

Country or Region	Types of Ceramic
Wuzhiba (Malacca)	Chuzhou Qingbai Ware, Earthen Jar
Danmaling (Tambralinga)	Qingbai Bowl with Incised Decoration
Pengkeng (Pahang)	Porcelain
Jilandan (Kelantan)	Celadon Plate, Bowl with Incised Decoration
Dingjialu (Terengganu)	Qingbai Bowl with Incised Decoration
Suluoge (Kedah)	Qingbai Bowl with Incised Decoration, Earthen Jar
Longyaxijiao (Langkasuka)	Qingbai Bowl with Incised Decoration
Longyamen (Singapore)	Chuzhou Ware
Dongchongguci (Songkhla)	Qingbai Bowl with Incised Decoration, Earthen Jar
Zhenlu (Mergui)	Earthen Jar
Danmiao (Dawei)	Unglazed Bowl, Celadon

Gulidimen (Tioman Island)	Bowl
Rong (Isthmus of Kra)	Qingbai Bowl with Incised Decoration, Porcelain pot, Vase
Bancu (Johor)	Porcelain

Source: Wang, Daoyi Zhilüe, 1980.

Archaeological Records of Shipwrecks

Ships were the primary means of transporting bulk cargo, and shipwrecks as time capsules provided abundant materials and preserved detailed information regarding seaborne trade.[44] Evidence of the diversity of commodities transported between these ports is growing as more shipwrecks are discovered by marine archaeologists. In this section, three shipwrecks (Table 5) dating from the eleventh to thirteenth centuries will be selected to clarify the ceramic trade relationship between the Quanzhou region and the Malay Peninsula. This was through a systematic comparison of the percentage of ceramics produced at different kiln sites on the shipwrecks, as well as the change.

Table 5: Shipwrecks from the Eleventh to Thirteenth Centuries in the South China Sea

Name	Date	Evidence of Dating	Possible Route
Pulau Buaya Wreck	Late 11th to mid-12th century	Typological study of ceramic cargo	From Guangdong to Muara Jambi
Huaguang Reef No.1 Wreck	Mid-late 12th century	Typological study of ceramic cargo	From Fuzhou, then Quanzhou, to Southeast Asia
Nanhai No.1 Shipwreck	Late 12th century to mid-13th century	Coins; typological study of ceramic cargo	From Quanzhou or Fuzhou, then Guangzhou, to Southeast Asia

Source: Compilation by Author(s).

The Pulau Buaya Wreck

The Pulau Buaya Wreck was found off the coast of Pulau Buaya in the Riau Archipelago, and the wreck was salvaged in 1989, but no hull was found. The number of complete ceramics and fragments totaled over 32,000 pieces, mainly from the kilns of Guangdong and Fujian during the Song dynasty, with some from Jingdezhen.[45] Comparison and analysis with Chinese chronological data tends to date the wreck to the middle of the eleventh century to the early twelfth century.

Qingbai wares make up the major proportion of the Chinese ceramics of the Pulau Buaya wreck, followed by green-glazed wares and brown-glazed wares. In terms of the vessel form, there are mainly bowls, vases, and jars.[46]

Qingbai wares have different shapes, decorations, and glaze colors, which can come from different provenances. The first group of wares is dominated by bowls (Figure 4), fully glazed, with exposed feet, and incised with a thin line lotus pattern on the exterior and a deer decoration on the interior. The foot rim is thin and may have been made separately from the body and bonded to it.[47] It has been attributed to the Yongfu kiln in Zhangping (Southwest Fujian) and the Luowanjing kiln in Zhangpu (South Fujian). The second type has a pure and translucent glaze, and the wares include bowls (Figure 5), vases, powder boxes, and ewers. It is thought to be a product of the Hutia kilns in

Jingdezhen, through the oblique knife technique.[48] The third type is the flower-mouthed vase (Figure 6), with incised flower decoration on the body and a low foot. Larger in number and the main form of cargo, they are thought to have come from the Wanpinglun kiln site in Gaide Town, Dehua County. The fourth type is the disc-mouthed melon prism vase (Figure 7), which is of regular form, with a flared foot rim, a fully glazed body, glazed flow, and an unglazed foot,[49] the same as the Type I vase from the Bijiashan kiln site in Chaozhou.

Figure 4: Qingbai Bowl.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

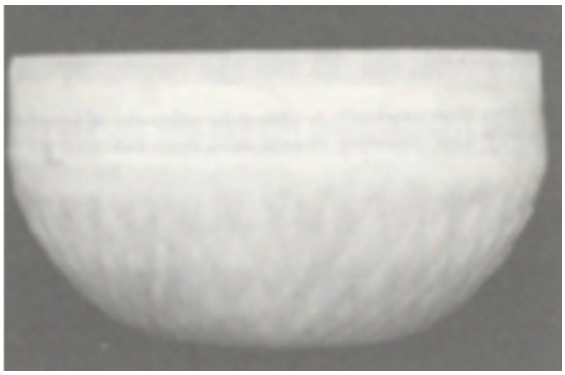


Figure 5: Qingbai Bowl.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

Figure 6: Qingbai Flower-mouthed Vase.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

Figure 7: Qingbai Disc-mouthed Melon Prism Vase.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

Green wares (Figure 8) were mainly bowls and small jars. Bowls with thicker mouth rims, low rims, and grey-green glazes are thought to be products of the Bijiashan, Dehua, and Xicun kilns. The four-handled small jar (Figure 9) glaze is rougher and less than the bottom, the glaze color is greenish-grey, and the glaze layer is thin and cracked, which may be the product of the Xicun or Bijiashan kiln site.[50]

Figure 8: Green Wares.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

Figure 9: Four-handled Small Jar.
Source: Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

The brown wares are mainly made up of coarse, small-mouthed vases (Figure 10) and big jars with folded rims, flat bases, and four lug handles, which appeared in large numbers.[51] The big jars with chrysanthemum motif marks on the shoulders are probably from the Qishi kilns in Guangdong, and the small-mouthed vases are probably from the Jinjiaoyi Mountain kiln site in Cizao County.

Figure 10: Brown Ware.
Source: : Hu, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014.

In summary, the Chinese ceramics excavated at Pulau Buaya wreck (Map 3) are all from southern China, such as the kiln sites at Zhangping, Zhangzhou, Dehua, and Cizao in Fujian, the kiln sites at Xicun and Chaozhou in Guangdong, and the Hutian kiln at Jingdezhen. Most of the ceramics were made in kilns in Guangdong Province, so it is safe to assume that Guangzhou was the port of embarkation. From its location and cargo, the ship's destination was probably the Batanghari River, as it led to the ancient Malayu capital of Muara Jambi.[52]

Map 3: Location of the Major Ports and Production Kiln Sites of the Chinese Ceramics on the Pulau Buaya Wreck.
Source: Drawings by Author(s).

The Huaguang Reef No.1 Wreck

The Huaguang Reef No. 1 wreck is located on the inner side of Huaguang Reef (Xisha Islands), and the site was discovered by local fishermen in 1996. In 1998, a preliminary survey and rescue excavation recovered 849 objects from the water, primarily ceramics, including qingbai ware and celadon, followed by brown and black glazed wares.[53] Other recovered artifacts included iron, copper mirror fragments, wooden cabin plugs, and miscellaneous items. In 2007 and 2008, the National Museum of China and other units jointly formed an underwater archaeological team. Huaguang Reef No. 1 wreck site carried out two large-scale excavations, and they successfully excavated nearly 10,000 pieces of ceramics, copper mirrors, iron, and other artifacts. They also cleaned up and extracted more than 500 hull components.[54] Based on the general characteristics of the ceramics and a green-glazed bowl (Figure 11) inscribed on the inner wall with the inscription "Made by Pan Sanlang in Ren Wu Year (Renwu Zai Pan Sanlang Zao 壬午载潘三郎造)," which means that Renwu is the year 1162 AD, the date of Huaguang Reef No. 1 wreck has been defined as the Early Southern Song Dynasty.

Figure 11: Green-glazed Bowl with Inscription.
Source: Liu, Overview of Ceramics from the "Huaguang Reef No. 1", 2014.

The ceramics found in Huaguang Reef No. 1 wreck include qingbai ware, greenware, brown-black ware, and so on, and the main types of wares are bowls, plates, saucers, boxes, pots, and jars. The main production areas are Jiangxi, Zhejiang, and Fujian, with the largest number of products from Fujian kilns.

Qingbai ware is divided into three categories. The first category is the Minqingyi kiln products, which are the largest number, the main shape of the bowls (Figure 12), and the plates. The second is the Dehua kiln products, mainly powder boxes and vases (Figure 13). Jingdezhen kiln products accounted for a tiny portion and were high quality, including bowls (Figure 14), plates, bottles, and pots.

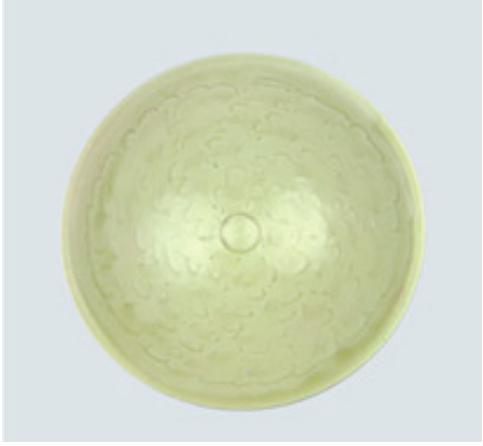


Figure 12: Qingbai Bowl.
Source: Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

Figure 13: Qingbai Box and Vase.
Source: Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

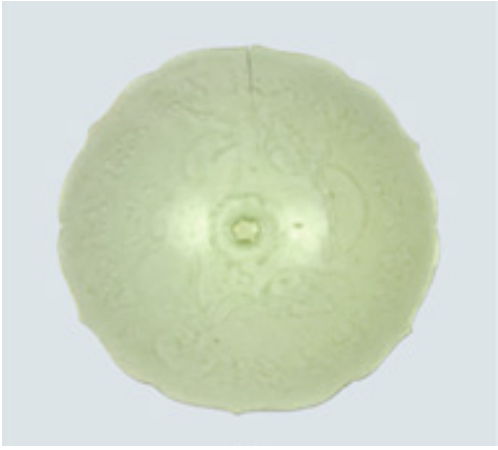


Figure 14: Qingbai Bowl.
Source: Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

Green wares, mainly big bowls and plates, are divided into three categories. The first type is a big bowl with green glaze or green-yellow glaze, usually decorated with a comb pattern on the outer wall and a floral pattern on the inner part. Among them, the lower quality ones came from the Tingxi kilns in Tong'an, while the higher quality ones are considered products of Pucheng, Songxi (Figure 15), or Longquan in Zhejiang. The second type is the bowls and plates with the character "Ji" (auspicious 吉) in the center of the inner wall, and the glaze color is mostly yellowish green, which is thought to be the product of the Luodong kiln in Nan'an. The third category is green-glazed wares with brown spots, mainly jars (Figure 16) and bottles, which are thought to have come from the kilns of Cizao.

Figure 15: Green-glazed Bowl.
Source: Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

Figure 16: Green-glazed Jar.
Source: Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

Most brown-black wares came from the Cizao kiln in bowls, small jars, kendis, and small-mouthed vases (Figure 17). The black-glazed bowls with gold flecks vaguely visible on the glaze in the center of the bowls are from other kiln sites, possibly Jianyang or Yulinting kiln sites in Wuyishan.

Figure 17: Small-mouthed Vases.
Source: : Meng, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018.

It can be seen that most of the Chinese ceramics on the Huaguang Reef No. 1 wreck (Map 4) were produced in Fujian Province. These included the kilns in the north of Fujian (Songxi, Pucheng, Jianyang, and Wuyishan), kilns located in the Immediate prefecture of Quanzhou (Dehua, Cizao, Nanan) and Fuzhou (Minqingyi). On the other hand, Jingdezhen and Longquan ceramics accounted for a much smaller proportion.[55] Minqingyi kiln, Dehua kiln, and Cizao kiln products are the most numerous, and Minqingyi kiln porcelain accounts for the largest proportion. This suggests that the ship may have sailed from Fuzhou port, loaded some of its cargo, and then to Quanzhou. The destination of the wreck would have been Southeast Asia.

Map 4: Location of the Major Ports and Production Kiln Sites of the Chinese Ceramics on the Huaguang Reef No. 1 Wreck.
Source: Drawings by Author (s).

The Nanhai No.1 Shipwreck

The Nanhai No.1 shipwreck was discovered in 1987 near the Chuanshan Archipelago in Guangdong Province. Its large number of species and the completeness of its preservation are rare among the shipwrecks found at sea in the world. In 2007, China's Hua Tian Long salvaged the whole ship and transported it to the Guangdong Maritime Silk Road Museum. In 2013, a comprehensive excavation and conservation project of the Nanhai No. 1 ancient shipwreck was launched. As of August 2019, over 180,000 artifacts have been unearthed from the Nanhai No. I shipwreck, including 142,000 pieces of Chinese ceramics.[56] Based on the coins found on the shipwreck and the study of the ceramic cargo, the Nanhai No.1 wreck is dated to the mid-late Southern Song period.

The glazed varieties of ceramics pulled out of the water can be divided into five categories: greenware, qingbai ware, blackware, lead-green ware, and brown ware, among which the former two types are predominant. Mainly from the southern kilns, such as Jiangxi kiln, Zhejiang kiln, and Fujian kiln, the types of wares are more apparent than in the Huaguang Reef No. 1 shipwreck, and some of the ceramic products of the northern kilns appeared also. The vessel forms include bowls, plates, saucers, pots, vases, jars, kendis, powder boxes, and so on.

These green wares display a diversity of clay textures, glaze characteristics, and decorations, clearly from different kilns. The first type is celadon from the Longquan kiln, usually showing a greyish-green or yellowish-green glaze, which is more lustrous and fully covered with glaze on the interior and exterior, except for the foot.[57] When it comes to bowls and plates (Figure 18), the interior wall is usually decorated with incised patterns, such as chrysanthemum petal patterns, orchid patterns, lotus patterns, and so on. This type of celadon in Nanhai No. 1 shipwreck ceramics goods accounts

for a relatively large proportion. The second type has a coarser body, a thin yellowish-green glaze that ends at the short foot, and a rough surface with a non-smooth cut, which suggests poor production techniques. Most are bowls (Figure 19), with simple shaded designs on the interior and striations on the exterior. These green wares are thought to be products of kiln sites in Fujian Province, such as Songxi kiln, Nan'an kiln, and Minqingyi kiln, and account for a smaller proportion of the ceramic cargo from the Nanhai No. 1 shipwreck. A third group of wares has a compact, reddish body and a dark or yellowish-green glaze that does not cover the entire body. Jars and pots predominate, with black or brown speckled decoration under the glaze. It is likely that this group was produced at the Cizao kiln (Figure 20) and represents only a tiny portion of the ceramic cargo. In the fourth group, there are two bowls (Figure 21) from the Yaozhou kiln in Shaanxi, which are plain on the exterior, but inside are carved with dense floral patterns on the base and upper walls, giving a relief effect.[58]

Figure 18: Celadon Plate.
Source: National Center of Underwater Cultural Heritage et al, Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Figure 19: Green Glaze Bowl.
Source:National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Figure 20: Green-glazed Small Jar.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Figure 21: Green Glaze Bowl.
Source: National Center of Underwater Cultural Heritage et al, Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Qingbai wares in the Nanhai No. 1 shipwreck are mainly from the three kilns of Jingdezhen, Dehua, and Minqingyi. The qingbai wares of the Jingdezhen kilns were primary bowls, plates (Figure 22), and saucers with thin bodies and bluish glazes, which were the main ceramic goods in large quantities. The Dehua kiln has more qingbai wares, including bowls, plates (Figure 23), covered boxes, small jars, vases, ewers, kendis, and incense burners. The wreck contained many Minqingyi kiln qingbai wares (Figure 24), like the Huguang Reef No.1 wreck.

Figure 22: Qingbai Plate.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Figure 23: Qingbai Plate.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Figure 24: Qingbai Bowl.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Most of the brown-glazed wares are jars with handles, small-mouthed compressed jars, and meiping (tall vases with a small mouth),[59] with a rough, reddish body and partially glazed in different colors. Part of the bottom of the vessel is exposed to the body with ink writing, signifying the products of the Cizao kiln (Figure 25) and the Qishi kiln. They are the main ceramic varieties, other than celadon and qingbai wares.

Figure 25: Meiping.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Lead-green glazed wares are mainly vases of various shapes, kendis, boxes, incense burners, plates (Figure 26), and small bowls, most of which were produced at the Cizao kiln.

Figure 26: Lead-green Glazed Petal Mouth Plate.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

Black wares are fewer in number and are mostly tea bowls. These wares were widely produced in Fujian Province, especially in the northern regions of Cizao (Figure 27), Jianyang, Fuqing, Nanping, and Wuyishan.[60]

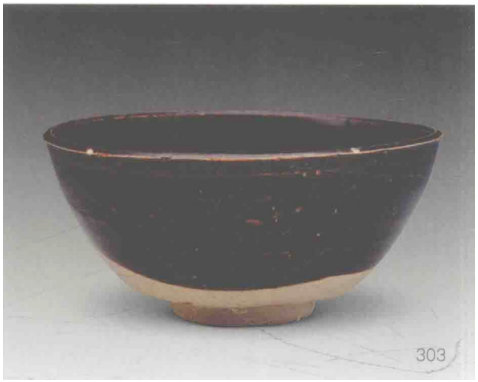


Figure 27: Black-glazed Bowl.
Source: National Center of Underwater Cultural Heritage et al., Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015, 2018.

The ceramics unearthed from the Nanhai No. 1 shipwreck (Map 5) were mainly from the kilns of Jingdezhen, Longquan, Dehua, Cizao, and Minqingyi, covering almost all the varieties of Chinese ceramics exported to Southeast Asia during the Southern Song Dynasty. Of these, more than half came from the Dehua and Cizao kilns in Quanzhou, with the Dehua kilns accounting for about one-fifth of the ceramics.[61] Most of the ceramic cargo was loaded in Quanzhou or possibly first loaded in Fuzhou with Minqingyi, Longquan, and Jingdezhen ceramics, as well as other ceramics produced in northern Fujian, and then sailed to Quanzhou. The sinking location suggests that the ship had called Guangzhou for repairs or to lift some cargo before sailing to Southeast Asia.

Map 5: Location of the Major Ports and Production Kiln Sites of the Chinese Ceramics on the Nanhai No.1 Shipwreck.
Source: Drawings by Author(s).

Discussion

In most cases, there was high uniformity among the ceramic cargos of contemporaneous shipwrecks, despite the differences in the market they were sailing towards.[62] Through the assemblages above of ceramics from three representative shipwrecks at various stages of the Song dynasty (Table 6), it is possible to observe the changes in the varieties and origins of exported ceramics.

Table 6: List of Ceramic Assemblages from Shipwrecks of Various Periods of the Song Dynasty

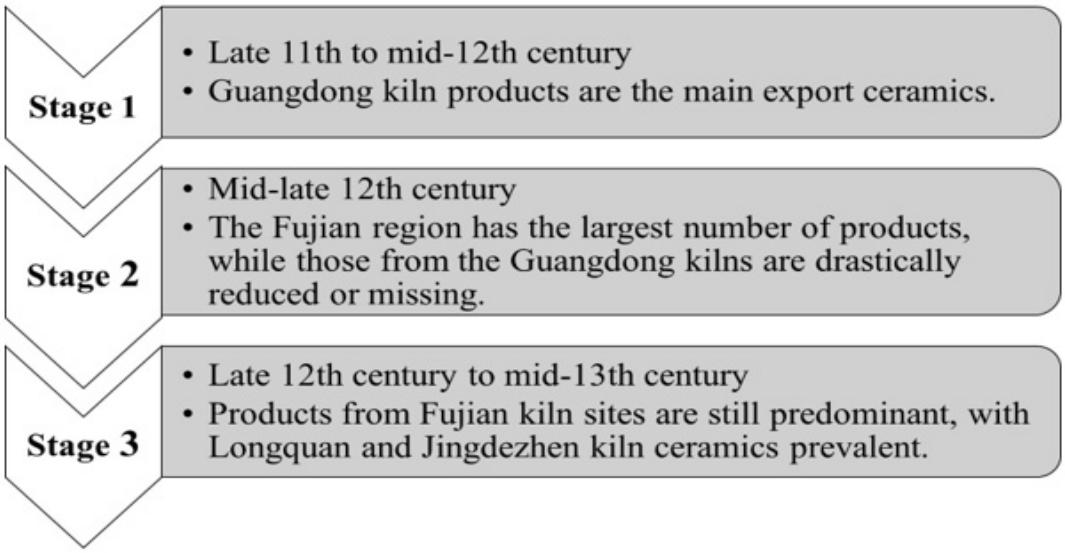
Name	Ceramic Origin		Ceramic Assembly
	Provenance	Kiln	
Pulau Buaya Wreck	Jiangxi	Jingdezhen Kiln	Ceramics from Xicun and Chaozhou kilns in Guangzhou and brown-glazed wares from Qishi kiln in Foshan are the most common, followed by qingbai wares from the Fujian coast.
	Guangdong	Xicun Kiln, Chaozhou Kiln, Qishi Kiln	
	Southern Fujian	Dehua Kiln, Zhangpu Kiln, Cizao Kiln, Zhangping Kiln	
Huaguang Reef No.1 wreck	Southern Fujian	Dehua Kiln, Cizao Kiln, Nan'an Kiln, Tong'an Kiln	Qingbai wares and celadon from Minqingyi kiln are the most numerous, as are qingbai wares from Dehua kiln and brown-black wares from Cizao kiln, followed by celadons from Longquan kiln, Songxi kiln, and Nan'an kiln, qingbai wares from Jingdezhen, and black-glazed wares from the Fujian region.
	Northern Fujian	Minqingyi Kiln, Songxi Kiln, Pucheng Kiln, Jianyang Kiln, Wuyishan Kiln	
	Jiangxi	Jingdezhen Kiln	
	Zhejiang	Longquan Kiln	
Nanhai No.1 wreck	Southern Fujian	Nan'an Kiln, Dehua Kiln, Cizao Kiln	Qingbai wares and celadons from Minqingyi kilns are the most numerous, as are qingbai wares from Dehua kiln, brown-black glazed and Lead-green glazed wares from Jinjiang Cizao kiln, and celadons from Longquan kilns, followed by qingbai wares from Jingdezhen kiln.
	Northern Fujian	Songxi Kiln, Minqingyi Kiln, Jianyang Kiln, Fuqing Kiln, Nanping Kiln, Wuyishan Kiln	
	Zhejiang	Longquan Kiln	
	Jiangxi	Jingdezhen Kiln	
	Shaanxi	Yaozhou Kiln	
	Guangdong	Qishi Kiln	

Source: Compilation by Author(s).

The variety of ceramic types underscores the adaptability of Quanzhou's kilns to foreign markets. Celadon and qingbai wares were valued for their aesthetic and functional qualities, while the dark-glazed wares of Cizao met distinct tastes and practical needs in the Malay Peninsula. This adaptability illustrates the region's economic priorities and its sensitivity to the cultural preferences of trading partners.

The evolution of ceramic trade patterns between the Quanzhou area and the Malay Peninsula from the eleventh to thirteenth centuries can be divided into three stages (Figure 28). The first stage, typified by the Pulau Buaya Wreck of the mid-to-late Northern Song dynasty, was dominated by ceramics from the coastal region of Guangdong, and it is strongly related to the period when the port

of Guangzhou was still the main center of trade in the South China Sea. This also corroborates the record of *Pingzhou Ketan*. In the early years of the Chongning period (A.D. 1102-1106), Guangdong, Fujian, and Zhejiang set up Shibosi, but only Guangzhou was the most prosperous. The second stage can be exemplified by the Huaguang Reef No. 1 wreck of the early Southern Song Dynasty, in which the Fujian region had the most significant number of products. In contrast, the products of the Guangdong kilns were drastically reduced or even totally disappeared. This situation is closely linked to the swift advancement of overseas trade around the ports of Quanzhou and Fuzhou during that period, which led to the expansion and prosperity of export-oriented ceramic production in coastal Fujian.[63] The Song and Yuan dynasties both chose to set up the Shibosi in Quanzhou, which further consolidated the status of Quanzhou ports in overseas trade. The third stage is typified by the Nanhai No. 1 shipwreck of the mid-to-late Southern Song dynasty. It was based on the continuation of the most significant number of ceramic products in Fujian, Longquan kiln in Zhejiang, and Jingdezhen kiln in Jiangxi, which were also sold overseas in large quantities. With the establishment of the critical position of the port of Quanzhou in overseas trade at that time, Longquan and Jingdezhen ceramics were able to be sold in larger quantities to Southeast Asia,[64] forming a pattern of exported ceramics in which the kilns of Fujian, Jiangxi, and Zhejiang were predominantly exported.



Quanzhou Region and the Malay Peninsula.
Source: Compilation by Author(s).

Conclusion

This article examines the development of the Quanzhou port from the eleventh to thirteenth centuries, and the quantity and range of ceramics produced at kiln sites in the Quanzhou area during the corresponding period. It concludes that the development of Quanzhou port and ceramic production complemented each other under the encouragement of the open maritime trade policy.

Active trade policies not only solidified Quanzhou's status as a vital trading hub but also extended its influence across the Malay Peninsula and beyond. By the late Southern Song Dynasty, Quanzhou had emerged as the largest trading port in China. The ceramic trade was central to this transformation, as demonstrated by detailed records and archaeological evidence that highlight the shift of key maritime trade centers from Guangzhou to Quanzhou. This transition underscores Quanzhou's pivotal role in linking southeastern China to international markets, facilitating unparalleled economic

exchanges during the Song and Yuan dynasties.

The growing prosperity of Quanzhou port drove the rapid development of its ceramics industry. Consequently, the production of export ceramics in southern Fujian flourished. According to the ceramic assemblages and proportions of the Song Dynasty shipwrecks, the coastal area of Fujian was the most typical region in the porcelain production system. Quanzhou is the most prominent, with the Dehua kiln, Nan'an kiln, and Cizao kiln. These kilns relied on the Min River basin and developed rapidly, forming a new regional porcelain production pattern.

Notes

[1] Hui, Jiao, *Collection Biographies of Eminent Monks*, Shanghai Classics Publishing House, Shanghai, 2011.
[2] Wang, Gungwu, "THE NANHAI TRADE: A Study of the Early History of Chinese Trade in the South China Sea." *Journal of the Malayan Branch of the Royal Asiatic Society,* 1958, 31 (182): pp. 1–135.
[3] Meng, Yuanzhao, "Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty." *Museum*, 2018, 2: pp. 11–26.
[4] Zhao, Rukuo, *Zhufan Zhi*, Shanghai Classics Publishing House, Shanghai, 1993.
[5] Ibid.
[6] Brown, Roxanna M., *The Ming Gap and Shipwreck Ceramics in Southeast Asia: Towards a Chronology of Thai Trade Ware*, The Siam Society, Bangkok, 2009.
[7] Miksic, J., "Chinese Ceramic Production and Trade." In [*Oxford Research Encyclopedia of Asian History*], Oxford University Press, Oxford, 2017.
[8] Ho, Chuimei, "The Ceramic Boom in Minnan during Song and Yuan Times." In [*The Emporium of the World: Maritime Quanzhou, 1000-1400*], Brill, Leiden, 2001, pp. 237–274.
[9] Asyaari Muhamad., "Seramik Purba yang Diperdagangkan di Semenanjung Malaysia." *SARI- International Journal of the Malay World and Civilisation*, 2010, 28 (1): pp. 3-40.
[10] Chen, Pengpeng, "The Trade of Ceramics in Quanzhou, 12th - 15th Century." In [*Proceedings of the International Conference: Chinese Export Ceramics and Maritime Trade, 12th - 15th Centuries*], Chinese Civilisation Centre, Hong Kong, 2005, pp. 47–57.
[11] Ye, Wencheng, "Survey Discovery of Qudougong Kiln in Dehua." *Cultural Relics*, 1965, (2): pp. 26–36.
[12] Asyaari Muhamad., Arkeologi dan Seni: Kajian Tembikar Kerajaan Melayu Johor-Riau-Lingga Abad 16-19 Masihi. Ph.D. diss. Universiti Malaya, Kuala Lumpur, 2005.
[13] Chen, Zhiping. "Reinterpretation of the History of Port Changes in Ming and Qing Dynasties: A Case Study of Quanzhou Coastal Ports", *Researches in Chinese Economic History*, 2012, (02): pp. 66-76.
[14] Li, Jun, "Comparative Study among Guangzhou, Mingzhou (Ningbo) and Quanzhou Port Development during the Boom of "Maritime Silk Road" in the Song and Yuan Dynasties." *Southern Heritage,* 2005, 1: pp. 76–82.
[15] Li, Jian-an, "The Export of Fujian Ceramics in the Southern Song Period and Related Issues." In Dynastic Renaissance: *Art and Culture of the Southern Song*, National Palace Museum, Taipei, 2010, pp. 361–382.
[16] So, K. L., *Prosperity, Region, and Institutions in Maritime China: The South Fukien Pattern, 946-1368*, 2000.
[17] Xu, Wenpeng, Export-Oriented Porcelain Economy in Song-Yuan China: Production Strategies, Interactions, and Networks. Ph.D. diss. University of Illinois at Chicago, Chicago, 2021.
[18] So, K. L., *Prosperity, Region, and Institutions in Maritime China: The South Fukien Pattern, 946-1368*, 2000.
[19] Ibid.
[20] Ibid.
[21] Ibid.

[22] Ibid.
[23] Ibid.
[24] Ibid.
[25] Tuo, Tuo, *Songshi*, Zhonghua shuju, Beijing, 1997.
[26] Ibid.
[27] Ma, Duanlin, *Wenxian Tongkao*, Jilin Publishing Group Co., Ltd, Jilin, 2005.
[28] Ibid.
[29] Zhou, Zhongjian, "Investigation on the Rise and Decline of Ancient Quanzhou Port." *Journal of Tianjin Normal University (Social Science)*, 1981, 4: pp. 70–76.
[30] Zhao, Yanwei, *Yunlu Manchao*, Zhonghua shuju, Beijing, 1996.
[31] Clark, Hugh. R., *Community, Trade, and Networks: Southern Fujian Province from the Third to the Thirteenth Century*, Cambridge University Press, Cambridge, 1991.
[32] Li, Donghua, *Quanzhou and the Maritime Communication of Medieval China*, Student Book Co., Ltd., Taipei, 1986.
[33] Zhao, Rukuo, *Zhufan Zhi*, 1993.
[34] Ibid.
[35] Ibid.
[36] Hong, Mai, *Yijian Zhi*, The Commercial Press, Shanghai, 1927.
[37] Tuo, Tuo, *Songshi*, 1997.
[38] Lin, Zhiqi, *Zhuozhai Wenji*, The Commercial Press, Ltd., Taipei, 1971.
[39] Zhao, Rukuo, *Zhufan Zhi*, 1993.
[40] Tuo, Tuo, *Songshi*, 1997.
[41] Wu, Zimu, *Mengliang Lu*, 21st Century Publishing Group, Nanchang, 2018.
[42] Wang, Danyuan, *Daoyi Zhilüe*, The Commercial Press, Beijing, 1980.
[43] Battuta, Ibn., *The Travels of Ibn Battuta: In the Near East, Asia and Africa*, Cosimo Classics, New York, 2010.
[44] Li, Peining, The Ceramic Trade between China and Southeast Asia during the Song Dynasty (960-1279). Ph.D. diss. University of Oxford, England, 2020.
[45] Ridho, Abu, and McKinnon, E.E., *The Pulau Buaya Wreck: Finds from the Song Period*, 1998.
[46] Ibid.
[47] Hu, Shuyang, "The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck." In *Chinese Maritime World*, Shanghai, 2014, pp. 48–67.
[48] Ibid.
[49] Ridho, Abu, and McKinnon, E.E., *The Pulau Buaya Wreck: Finds from the Song Period*, 1998.
[50] Hu, Shuyang, The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck, 2014, pp. 48–67.
[51] Ibid.
[52] Flecker, M., "Sister Ships: Three Early 12th Century CE Shipwrecks in Southeast Asia." *Current Science,* 2019, 117 (10): pp. 1654–1663.
[53] The Underwater Archaeology Research Center of National Museum, and Bureau of Cultural Relics of Hainan Province, 西沙水下考古 *[Underwater Archaeology in Xisha Islands (1998–1999)]*, Science Press, Beijing, 2006.
[54] Zhao, Jiabin, "The Development and Major Achievements of Underwater Archaeology in China." In *Studies of Underwater Archaeology*, Science Press, Beijing, 2012,13–56.
[55] Li, Peining, The Ceramic Trade between China and Southeast Asia during the Song Dynasty (960-1279), 2020.
[56] Ibid.

[57] National Center of Underwater Cultural Heritage, Guangdong Provincial Institute of Cultural Relics and Archaeology, Chinese Academy of Cultural Heritage, Guangdong Museum, and Maritime Silk Road Museum of Guangdong, 南海*I*号沉船考古报告之二*-2014~2015*年发掘 *[Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015]*. Cultural Relics Press, Beijing, 2018.
[58] Ibid.
[59] Li, Peining, The Ceramic Trade between China and Southeast Asia during the Song Dynasty (960-1279), 2020.
[60] Zeng, Fan, *Overview of Ceramic Archaeology in Fujian*, Fujian Province Cartographic Publishing House, Fuzhou, 2001.
[61] He, Guowei, ""Nanhai I Shipwreck' and 'Maritime Silk Road"." *China Ship Survey,*2019, 10: pp. 112–116.
[62] Li, Peining, The Ceramic Trade between China and Southeast Asia during the Song Dynasty (960-1279), 2020.
[63] Meng, Yuanzhao, Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty, 2018, pp. 11–26.
[64] Ye, Wencheng, and Rui, Guoyao, "The Export of Longquan Celadon in the Song and Yuan Periods and the Discussion of Related Issues." *Journal of Maritime History Studies*, 1987, 2: pp. 1–11.

References

Asyaari Muhamad. 2005. *Arkeologi dan Seni: Kajian Tembikar Kerajaan Melayu Johor-Riau-Lingga Abad 16-19 Masihi*. Ph.D. diss. Universiti Malaya: Kuala Lumpur.

Asyaari Muhamad. 2010. "Seramik Purba yang Diperdagangkan di Semenanjung Malaysia," *SARI-International Journal of the Malay World and Civilisation* 28, no.1: 3-40.

Asyaari Muhamad & Amir Husaini Saiffuddin. 2022. "The Distribution of the Ancient Malay Kingdoms in Indochina from the First Century to the Fourteenth Century from the Context of the Spatial and Ethnoarchaeology," *Geografia: Malaysian Journal of Society and Space* 18, no.4: 102–116.

Battuta, Ibn. 2010. *The Travels of Ibn Battuta: In the Near East, Asia and Africa*. New York: Cosimo Classics.

Brown, Roxanna M. 2009. *The Ming Gap and Shipwreck Ceramics in Southeast Asia: Towards a Chronology of Thai Trade Ware*. Bangkok, Thailand: The Siam Society.

Chen, Pengpeng. 2005. "The Trade of Ceramics in Quanzhou, 12th - 15th Century." In *Proceedings of the International Conference: Chinese Export Ceramics and Maritime Trade, 12th - 15th Centuries*, edited by Peikai Cheng, 47–57. Hong Kong: Chinese Civilisation Centre, City University of Hong Kong.

Clark, Hugh. R. 1991. *Community, Trade, and Networks: Southern Fujian Province from the Third to the Thirteenth Century*. Cambridge: Cambridge University Press.

Feng, Xianming. 1965. "Major Achievements in Ceramic Archaeology in New China," *Cultural Relics*, no.9: 26–56.

Flecker, M. 2019. "Sister Ships: Three Early 12th Century CE Shipwrecks in Southeast Asia." *Current Science* 117, no.10: 1654–1663.

Fu, Enfeng & Fu, Baoling. 2018. "Porcelain collected at Guiyao kiln in Anxi." *Fujian Wenbo*, no.4: 27-32.

He, Guowei. 2019. "Nanhai I Shipwreck" and "Maritime Silk Road." *China Ship Survey*, no.10: 112–116.

Ho, Chuimei. 2001. "The Ceramic Boom in Minnan during Song and Yuan Times." In *The Emporium of the World: Maritime Quanzhou, 1000-1400*, edited by Angela Schottenhammer, 237–274. Leiden: Brill.

Hong, Mai. 1927. *Yijian Zhi*. Shanghai: The Commercial Press.

Hu, Shuyang. 2014. "The Ceramic Trade between China and Southeast Asia during Song Dynasty: A Case Study on Pulau Buaya Wreck." In *Chinese Maritime World*, 48–67. Shanghai.

Hui, Jiao. 2011. *Collection Biographies of Eminent Monks*. Shanghai: Shanghai Classics Publishing House

Li, Donghua. 1986. *Quanzhou and the Maritime Communication of Medieval China*. Taipei: Student Book Co., Ltd.

Li, Jian-an. 2010. "The Export of Fujian Ceramics in the Southern Song Period and Related Issues." In *Dynastic Renaissance: Art and Culture of the Southern Song*, 361–382. Taipei: National Palace Museum.

Li, Jun. 2005. "Comparative Study among Guangzhou, Mingzhou (Ningbo) and Quanzhou Port Development during the Boom of "Maritime Silk Road" in the Song and Yuan Dynasties," *Southern Heritage*, no.1: 76–82.

Li, Peining. 2020. *The Ceramic Trade between China and Southeast Asia during the Song Dynasty (960-1279)*. Ph.D. diss. University of Oxford:England.

Liu, Aihong. 2017. "Overview of Ceramics from the "Huaguang Reef No. 1" Shipwreck," *Cultural Relics World*, no. 6: 41–48.

Lin, Zhiqi. 1971. *Zhuozhai Wenji*. Taipei: The Commercial Press, Ltd.

Ma, Duanlin. 2005. *Wenxian Tongkao*. Jilin: Jilin Publishing Group Co., Ltd.

Meng, Yuanzhao. 2018. "Research on Huaguang Reef Shipwreck I and Overseas Trade on the Maritime Silk Road in the Song Dynasty," *Museum*, no. 2: 11–26.

Miksic, J. 2017. "Chinese Ceramic Production and Trade." In *Oxford Research Encyclopedia of Asian History*. Oxford: Oxford University Press.

National Center of Underwater Cultural Heritage, Guangdong Provincial Institute of Cultural Relics and Archaeology, Chinese Academy of Cultural Heritage, Guangdong Museum, and Maritime Silk Road Museum of Guangdong. 2018.南海*I*号沉船考古报告之二*-2014~2015*年发掘 *[Archaeological Report on Nanhai I Shipwreck Series II: Excavation of 2014-2015]*. Beijing: Cultural Relics Press.

Ridho Abu & McKinnon, E. E. 1998. *The Pulau Buaya Wreck: Finds from the Song Period*. Jakarta, Indonesia: Ceramic Society of Indonesia.

So, K. L. 1997. "The Spatial Patterns of the Export Ceramic Industry in Southern Fukien and Kwang-Tung under the Sung Dynasty: A Comparative Study." In *Essays in Chinese Maritime History*, edited by Chang Yen-hsien, 125–72. Taipei: Sun Yat-Sen Institute for Social Sciences and Philosophy Academia Sinica.

So, K. L . 2000. *Prosperity, Region, and Institutions in Maritime China: The South Fukien Pattern, 946-1368*. Cambridge: Harvard University Asia Center.

The Underwater Archaeology Research Center of National Museum, and Bureau of Cultural Relics of Hainan Province. 2006.西沙水下考古 *[Underwater Archaeology in Xisha Islands (1998–1999)]*. Beijing: Science Press.

Tuo, Tuo. 1997. *Songshi*. Beijing: Zhonghua shuju.

Wan, Jun.2022. "The Production and Overseas Trade of Dehua Kiln Porcelain in the Song and Yuan Dynasties," *Journal of Gugong Studies*, no.1: 294–307.

Wang, Danyuan. 1980. *Daoyi Zhilüe*. Beijing: The Commercial Press.

Wang, Gungwu. 1958. "THE NANHAI TRADE: A Study of the Early History of Chinese Trade in the South China Sea," *Journal of the Malayan Branch of the Royal Asiatic Society* 31, no.182: 1–135.

Wu, Zimu.2018. *Mengliang Lu*. Nanchang: 21st Century Publishing Group.

Xu, Qingquan. 1986. "Song and Yuan Quanzhou Ceramics Production," *Journal of Maritime History Studies*, no.1: 88–92.

Xu, Wenpeng. 2021. *Export-Oriented Porcelain Economy in Song-Yuan China: Production Strategies, Interactions, and Networks*. Ph.D. diss. University of Illinois at Chicago, Chicago.

Yang, Zelin. 2016. "A Preliminary Discussion on the Production of Song-Yuan Celadon in Fujian and Related Issues," *Cultural Relics of the East*, no.3: 73–81.

Ye, Wencheng. 1965. "Survey Discovery of Qudougong Kiln in Dehua," *Cultural Relics*, no. 2: 26–36.

Ye, Wencheng, & Rui, Guoyao. 1987. "The Export of Longquan Celadon in the Song and Yuan Periods and the Discussion of Related Issues," *Journal of Maritime History Studies*, no.2: 1–11.

Zeng, Fan. 2001. *Overview of Ceramic Archaeology in Fujian*. Fuzhou: Fujian Province Cartographic Publishing House.

Zhao, Jiabin. 2012. "The Development and Major Achievements of Underwater Archaeology in China." In *Studies of Underwater Archaeology*, 13–56. Beijing: Science Press.

Zhao, Rukuo. 1993. *Zhufan Zhi*. Shanghai: Shanghai Classics Publishing House.

Zhao, Yanwei. 1996. *Yunlu Manchao*. Beijing: Zhonghua shuju.

Zhou, Zhongjian. 1981. "Investigation on the Rise and Decline of Ancient Quanzhou Port," *Journal of Tianjin Normal University (Social Science)*, no.4: 70–76.