

Digital Map of Aromatic Spice Trade, Camphor: Development of Learning Media for the History of North Sumatra in the Department of History Education, Universitas Negeri Medan

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Abstract. There is no historical narrative summary of the aromatic spice route locally in North Sumatra in written and digital form, so it is necessary to conduct research on the History of the Main Routes of Aromatic Spices Through Digital Map Summary to Improve History Learning in the Unimed History Education Department. This study aims to produce 1) a brief historical narrative in building the historical construction of the aromatic spice route in the western region of North Sumatra and 2) create a summary digital map of the aromatic spice route in the western region of North Sumatra. This research is a type of research and development (research and development) with reference to the model developed by Borg & Gall. The Digital Map of Aromatic Spice Trade is very helpful in increasing history learning, especially in local history courses at the Department of History Education, Universitas Negeri Medan.

Keywords: Maps, Digital, History, Learning.

1 Introduction

The spice trail theme is a hot topic to talk about right now. Especially with the priority activities of the Directorate General of Culture, Ministry of Education and Culture (Kemendikbud), namely establishing it as a world heritage "World Heritage" [1]. Various activities and research are carried out to support the activities of this spice route. This was also suggested by the Head of the Research and Development Agency (Balitbang) and Books, Ministry of Education and Culture (Kemendikbud), Totok Suprayitno, that the government together with academics, history lecturers and history communities need to work together to build a strong narrative about history. Spice Trail. The lecturers or history teachers will later internalize this narrative to students through learning. This is one of the moments where education and cultural policy can come together [2].

Based on the historical teaching materials that Indonesian people continue to consume, the spice route tends to be understood as a route that gave birth to the practices of colonialism and imperialism which emerged when European explorers arrived since the 15th century AD with missions of gold, glory and the gospel [3]. According to Purwanto [4] the understanding of spices is caused by illusions from the romanticism of the past which causes the spice route not to be placed in a specific time context, so that discussions about spices are limited to cooking spices, or matters of the tongue but ignore the aromatic (smell) aspect of spices such as camphor, frankincense, resin and agarwood which are often found in the western region of North Sumatra.

The western region of North Sumatra is famous as an ancient port city and a center for the camphor and incense trade since the 6th century [5] [6]. These areas connect the upstream and downstream trade in aromatic spices, such as Barus, Sidikalang, Tarutung and Padang Sidempuan [7]. The brilliance of the aromatic spice route is what makes the West region of North Sumatra one of the central areas for international trade [8]. Looking at the current situation, these aromatic spices are no longer a favorite trade commodity. Tree felling, encroachment and conversion of spice forests to oil palm plantations have resulted in a decline in the population of aromatic spice trees, which are now increasingly difficult to find [9], thereby fading traces of existing spice routes.

However, it is quite unfortunate that this spice route has not been documented in writing or digitally by research and educational institutions in North Sumatra. It is proven that there are no Google and YouTube search engines. Considering that many of the maps of the spice route in the western region of North Sumatra are disconnected, this research was conducted to trace the history of aromatic spice trails in the western region of North Sumatra, in order to reveal local historical stories in North Sumatra about the spice route. This research also documents the spice route in the form of a summary in a digital map which is packaged nicely for the public interest or the world of education, so that this research is able to revive the heyday of aromatic spice commodities in the past towards future prosperity.

2 Research Methods

This research uses the Research and Development method or what is often abbreviated as R&D. This research method was created by Borg and Gall in 1989 by producing products, in the form of models, modules, hardware or software which are commonly used to produce a particular product with the aim of testing the effectiveness of a product [18].

The research and development method created by Borg and Gall is very appropriate for solving the problem of the spice route on the west coast of North Sumatra and applying it in the form of digitalization in an effort to utilize technology that is currently developing in the current 4.0 era. The product produced through this research is in the form of software, namely Digital Mapping (digital map) which shows the movement of the aromatic spice route in western North Sumatra from the 1st century AD to the 19th century with the center of movement in Barus City, South Tapanuli. Borg and Gall's research procedure consisted of 10 intense and detailed stages.

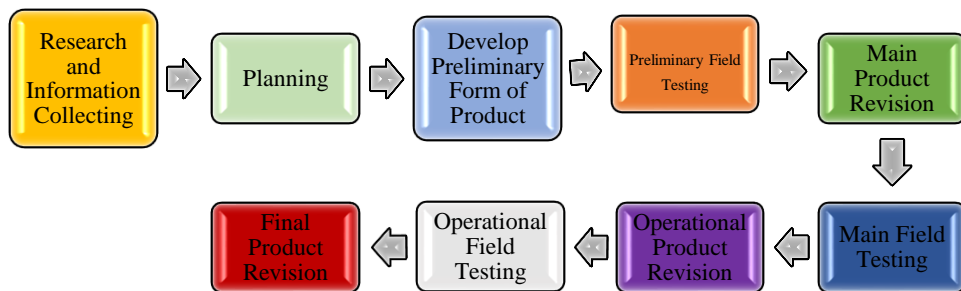


Fig. 1. Development Design Diagram

The research location is the Department of History Education, Medan State University, North Sumatra and the Western Region of North Sumatra as a spice center. The research subjects were 30 students from the Department of History Education, Medan State University, North Sumatra.

Data collection techniques were carried out using qualitative and quantitative techniques. Qualitative data was obtained by conducting library research and interviews, while quantitative data was obtained from filling out questionnaires to see responses to the products created. In this study, the scoring guidelines used can be seen in the table below.

Table 1. Criteria for textbook eligibility scores.

| Mean score | Criteria | Note |
|------------|-----------|------------------|
| 5 | Very good | No revision |
| 4 | Well | Minor revision |
| 3 | Enough | Partial revision |
| 2 | Less | Major revision |
| 1 | Very less | Overall revision |

The data analysis technique used in this research is quantitative descriptive analysis technique. The data that will be analyzed is data sourced from product experts, material experts, and students majoring in history education regarding the quality and suitability of the product.

3 Results and Discussion

3.1 Preliminary studies

This research stage starts from a preliminary study, namely observations of students and lecturers to see the problems of using learning media in the classroom. From the observation results, it can be seen that students and lecturers use the spice path theme text book in the learning process in class. The learning process in class is not interesting and less innovative because it only uses textbook learning media.

In the next stage, namely literature study, the author conducted a reference search to compile material that would be used as a manuscript about a historical narrative about the route of the aromatic spice camphor. The narrative is: According to the definition of the Big Indonesian Dictionary, spices are a type of aromatic plant product such as nutmeg, cloves, pepper to give a special smell and taste to dishes. Etymologically, spices. Meanwhile, aromatic is related to or has aroma. So aromatic spices are plants that have aroma. The aromatic spice route in the Western Region of North Sumatra has extraordinary potential when studied from various historical sources. Aromatic spices in the West region of North Sumatra consist of camphor, frankincense and resin.

One of the important trading ports producing camphor or camphor on the West coast of North Sumatra is Barus. According to Ptolemy, in the 2nd century AD, Barus was a camphor producing place [20]. The route of the aromatic spice camphor or Barus chalk based on historical sources spans the period from the 9th century to the 10th century AD. The camphor producing areas on the West coast of North Sumatra in this century were Lobutua (Barus), Panai, Simangambat and Mandailing Natal which are connected the Asian continent Sri Lanka, India, Persia, Arabia and the European continent including Jerusalem and Rome. Can be seen below:

Table 2. Camphor / Barus Lime in the 9th to 10th centuries AD

| North Sumatra Region | Asia and Other Continents |
|----------------------|---|
| Lobutua (Barus) | Sri Lanka |
| Panai | Pedangan India (Asia), Benggala, Koramandel |
| Simangambat | Persia |
| Mandialing Natal | Arab |
| | Yahudi (Yarusalem) |
| | Kristen (Roma) |

Source:[21]

Barus Cretaceous or camphor in the 11th to 13th centuries started from the West coast of North Sumatra, namely Lobutua (Barus), Panai, Simangambat, Mandiling Natal and Teluk Aru which stretched the route outside North Sumatra, namely Lamuri, Pasai Aceh and Padang Pasaman and connected the Continent. Asia (Burma, Sri Lanka, India (Bengal and Coromandel) and Europe (Persia, Jerusalem and Rome). Can be seen below:

Table 3. Camphor 11th to 13th Century

| North Sumatra Region | Outside North Sumatra | Asia and Other Continents |
|----------------------|-------------------------|---|
| Lobutua (Barus) | Lamuri | Burma, Sri Lanka |
| Panai | Pasai, Aceh | Pedangan India (Asia), Benggala, Koramandel |
| Simangambat | Lewang (padang pasaman) | Persia |
| Mandialing Natal | | Arab |
| Teluk Aru | | Yahudi (Yarusalem), Kristen (Roma) |

Source:[21]

Barus chalk or camphor in the 14th to 15th centuries started from the West coast of North Sumatra, namely Lobutua (Barus), Tarutung and Aru Bay, then connected islands outside North Sumatra, namely Aceh, Pasai, Lamuri, Pedir and Kedah. The route in this century also connected the Asian route (Fukian, Cambodia, China, Calcutta and Bengal) and the European continent, namely Persia. Can be seen below:

Table 4. Camphor in the 14th-15th Centuries

| North Sumatra Region | Outside North Sumatra | Asia and Other Continents |
|------------------------|-----------------------|---------------------------|
| Lobutua (Barus) | Aceh | Fukian, Kamboja |
| Tanah Batak (Tarutung) | Pasai | Tiongkok |
| Teluk Aru | Lamuri | Calcuta, Benggala |
| | Pedir | Persia |
| | Kedah | Yemen |
| | Malaka | Mesir (Alexandria) |
| | | Yunani |
| | | Romawi |

Source:[21]

Barus chalk or camphor in the 16th to 17th centuries started from the West coast of North Sumatra, namely Lobutua (Barus), and Singkeal, then connected islands outside North Sumatra, namely Pasai, Pedir and Palembang. The route in this century also connects to the Asian route (Malay Peninsula, Kedah, Malaysia, Perak, Tanjung, Kampar, Siam, Pahang, Bengkalis, Brunei, Siangkang, Suluh, Persia, Syia, Bengal, Coromandel, Karaka, Gujarat and the European continent, namely Persian. Can be seen below:

Table 5. Camphor in the 16th-17th Centuries

| North Sumatra Region | Outside North Sumatra | Asia and Other Continents |
|----------------------|-----------------------|---------------------------|
| Singkel | Pasai | Semenanjung Melayu |
| Barus | Pedir | Kedah |
| | Palembang | Malaysia, |
| | | Perak |
| | | Petani |
| | | Kampar |
| | | Siam |
| | | Pahang |
| | | Bengkalis |
| | | Brunei |
| | | Siam |
| | | Siangkang |
| | | Suluh |
| | | Persia |
| | | Syiah |
| | | Bneggala, Koromandel, |
| | | Gujarat, Karakal |

Barus chalk or camphor in the 19th to 20th centuries started from the West coast of North Sumatra, namely Alas, Singkel (Pakpak Dairi), East Coast (Langkat, Serdanga, Deli), Simanulang, Taruan, Parbuhitan, Si moon, Donan dolak, Sihikkit, Sitopongan, Sanjaraan, Huta Batu, Huta Tua (Northeastern Hills of Sumatra), Rambe and Pusuk. This route also connects producing areas outside North Sumatra, namely Aceh, Bengis Water Harbor and Palembang. This route in this century also connects to Asia (Singapore, Melaka and Cairo) and the European continent, namely the Netherlands. Can be seen below:

Table 6. Camphor in the 19th to 20th Centuries

| North Sumatra Region | Outside North Sumatra | Asia and Other Continents |
|---|-----------------------|---------------------------|
| Alas | Aceh | Singapura |
| Singkel (Pakpak Dairi) | Pelabuhan Air Bengis | Melaka |
| Pantai Timur (Langkat, Serdanga, Deli) | Palembang | Kairo |
| Simanulang, Taruan, Parbuhitan, Si bUlan, Donan dolak, Sihikkit, Sitopongan,, Sanjaraan, Huta Batu, huta tua (Perbukitan Sebelah Timur Laut Suamtera) | | Belanda (Eropa) |
| Rambe | | |
| Pusuk | | |

3.2 Development Studies

This stage consists of creating a digital map of the aromatic spice pathway of camphor. The manufacturing process is using the my maps application on Google. The stages are:

3.2.1 Create a Maps account

Creating this map consists of opening your computer and entering your Google My Maps account, login and create a new map. Then click on the top left to create a map title and provide an explanation of the name and description.

3.2.2 Open Maps

Opening this map consists of several stages, namely reopening your My Maps account on Google and logging in as a Maps user. Then open the map that you have named and the script, you can edit or create the map. Next to "Basemap" at the bottom of the left pane, click the Down Arrow. To choose a style, click on an image

3.2.3 Map Making

After the steps above you can create a map route from the line drawing application menu, add a route, add markers and select an item. Determine the routes, adjust the position of the route based on the historical narrative of the spice route. The results are as follows: [22].

3.2.4. Evaluation and Validation of Product Development

The Spice Route Distribution Map was tested in the 5th semester of classes D and E, class of 2021, 2023/2043 academic year, then validated by media experts, namely lecturers who specialize in the field of history learning. Components assessed by media experts on the aromatic spice pathway map. This map has been validated by material experts who have expertise in the field of local history, North Sumatra. Both material and media validation results are assessed based on existing values.

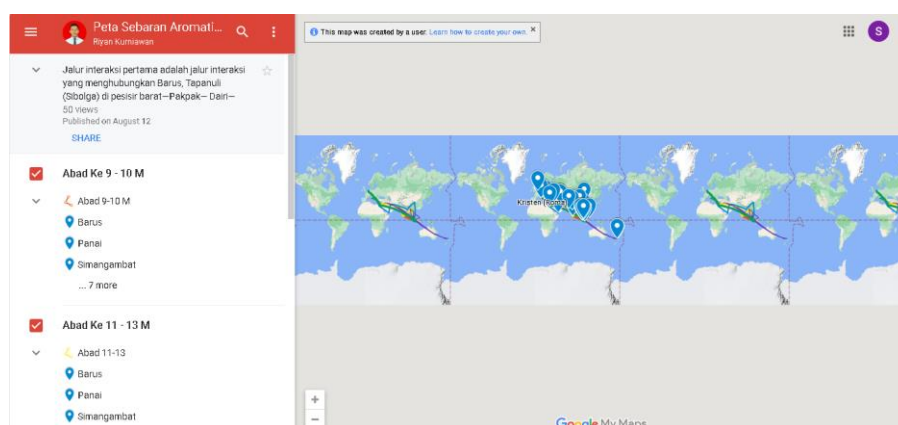


Fig. 2. Camphor Aromatic Spice Route

3.3 Discussion

The Spice Route Distribution Map has been tested on the 5th semester of classes D and E class 2021 for the 2023/2043 academic year, then validated by media experts, namely lecturers who specialize in the field of history learning. The components assessed by media experts on the aromatic spice route map received an average score of 4.30 in the 'Very Good' category. The map was validated by material experts who have expertise in local history, North Sumatra. The average value of the components that have been assessed reaches 4.40 in the "Very Good" category. The two results from material and media validation concluded that the camphor aromatic pathway map was suitable for use as digital media in the learning process at the Department of History Education, Medan State University.

The next stage was validation by media experts and material experts on the route map for the aromatic spice camphor three times for class D and E class 2021 students at the Unimed History Education Department. The conclusion obtained is that students are very serious and enthusiastic in the learning process in class because they use online digital media. Students gave excellent marks to the route map. The student grades given are the average test score, namely 4.25 (Very Good) on the first trial, 4.30 (Very Good) on the second trial, and 4.35 (Very Good) on the third trial. It was concluded that based on the three trials, the aromatic

spice pathway map was suitable for use as digital media in the history learning process at the Department of History Education, Medan State University.

4 Conclusion

The map of the Aromatic Spice Route in Kapur Barus was designed using the help of Google Maps by creating a historical narrative of the aromatic spice route in the western part of North Sumatra. This map increases knowledge about the local history of North Sumatra through digital maps. The space and time between history and geography can be combined in historical digital media. Through project-based learning maps can be created in the learning process in the Unimed History Education Department so that learning in space is more innovative and contemporary. This activity is also oriented towards investigative, case solving, independent and current skills. The development of this spice route map used the Borg and Gall development research method which was carried out in several stages. First, research and data collection, namely observation and literature study to create a historical narrative. Second, activity planning. Third, making maps on Google Maps; b) validation of media experts and material experts. Fourth, product testing and revision. Product trials were carried out three times on students in classes D and E in the Department of History Education class of 2021. When each trial found deficiencies, revisions would be made to improve the product. The feasibility assessment from media experts obtained an average score of 4.30 in the 'Very Good' category, while the average score from material experts reached 4.40 in the "Very Good" category. The conclusions of the two experts concluded that the map of the aromatic camphor spice route was "very suitable" to be used as digital media in local history learning at the Department of History Education, Medan State University. In addition, the answers from students concluded that the map was very suitable for use as an online digital learning medium. This is shown by the average score of the first trial being 4.25 (Very Good), the second trial being 4.30 (Very Good) and the third trial being 4.35 (Very Good).

References

- [1] <https://www.kemdikbud.go.id/main/blog/2021/01/jalur-rempah-jadi-program-prioritas-kebudayaan-tahun-2021>
- [2] Kementerian Pendidikan dan Kebudayaan » Republik Indonesia (kemdikbud.go.id).
- [3] Ulhaq, Zia: Respon bangsa Indonesia terhadap imperialisme dan kolonialisme dalam bidang politik, ekonomi, sosial-budaya, dan pendidikan sejarah kelas XI, Direktorat SMA, Direktorat Jenderal P, DIKDAS dan DIKMEN, (2022)
- [4] Purwanto, Bambang: PPT jalur rempah & upaya dekolonisasi, Seminar Nasional Ilmu Sejarah, Jogyakarta: HMIS FIS-UNY, 18 November 2021, pkl. 09.00-13.00 WIB, (2021)
- [5] Vuuren : De handel van Baroes, als oudste haven op Sumatra's Westkust, Verklaard: en voor de Toekomst Beschouwd.' Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundige Genootschap (1908)
- [6] Wolters, OW.: Early Indonesia Commerce. A Study of the Origin of Sriwijaya, Ithaca, Cornell University Press (1908)

- [7] Perret, Daniel.: Kolonialisme dan etnisitas: Batak dan Melayu di Sumatra Timur Laut. Jakarta: Kepustakaan Populer Gramedia (2010)
- [8] <https://jalurrempah.kemdikbud.go.id/jejak-jalur-rempah-sumatera-utara-merawat-ingatan-melestarikan-kebudayaan>
- [9] Aswandi & Cut Rizlani Kholibrina.: Pohon-pohon penghasil damar di Sumatera bagian Utara, damar, tusam, kapur dan kemenyan (The dammar-producing trees in Northern Sumatra: Agathis, Shorea, Dryobalanops and Styrax), Sumut: Balai Penelitian Pengembangan Lingkungan Hidup dan Kehutanan Aek Nauli (2018)
- [10] Modul tema 6 paket sejarah Indonesia paket C, 2018
- [11] Mulyadi, Yadi.: Kemaritiman, Jalur Rempah dan Warisan Budaya Bahari Nusantara, https://www.researchgate.net/publication/309673900_Kemaritiman_Jalur_Rempah_dan_Warisan_Budaya_Bahari_Nusantara? (2022)
- [12] Marihando, Djoko, Kanumoyoso, Bondan.: Rempah, jalur rempah, dan dinamika masyarakat nusantara, Jakarta: Direktorat Sejarah, Direktorat Jenderal Kebudayaan, Kementerian Pendidikan dan Kebudayaan (2015)
- [13] Turner, Jack.: Sejarah rempah dari erotisme sampai imperialism. Jogjakarta: Komunitas Bambu (2011)
- [14] Rahman, Fadli.: Negeri rempah-rempah” dari masa bersemi hingga gugurnya kejayaan rempah-rempah “Spices Land”: From The Spring To The Fall Of Spices Glory”. Patanjala, ISSN 2085-9937 (print), ISSN: 2598-1242 (online) (2019)
- [15] Perret, Daniel & Surachman, Heddy: Barus Negeri Kamper: Sejarah Abad Ke-12 hingga Pertengahan Abad Ke-17, Jakarta: KPG (2015)
- [16] Guillot, Claude.: Lobu tua sejarah awal Barus, Jakarta: Yayasan Obor Indonesia (2012)
- [17] Mulyadi, Yadi: Kemaritiman, jalur rempah dan warisan budaya bahari Nusantara, https://www.researchgate.net/publication/309673900_Kemaritiman_Jalur_Rempah_dan_Warisan_Budaya_Bahari_Nusantara? (2016)
- [18] Utami, Indah Wahyu Puji.: Pemanfaatan digital history. JPSI, Vol 3, No. 1, (2020)
- [19] Sugiyono.: Metode penelitian pendidikan pendekatan kuantitatif, kualitatif, dan R & D. Bandung: Alfabeta (2009)
- [20] Ambary, Hasan Muarif: “Menemukan peradaban jejak arkeologis dan historis Islam Indonesia”. Jakarta: Logos Wacana Ilmu, 2001, cet. 2, h. 35-49 (1998)
- [21] Perret, Daniel & Surachman, Heddy: Barus negeri kamper: Sejarah abad ke-12 hingga pertengahan abad ke-17, Jakarta: KPG (2015)
- [22] [https://www.google.com/maps/d/u/0/edit?mid=1IX8D1618p393ESs3oTValbut5QDVNck&usp=sharing:](https://www.google.com/maps/d/u/0/edit?mid=1IX8D1618p393ESs3oTValbut5QDVNck&usp=sharing)