

Method For Determining the Qiblat Direction of The Mosque: Analysis of Determining the Qibla Direction of the Al-Islahiyah Mosque, Gampong Lambhuk, Ulee Kareng District, Banda Aceh City

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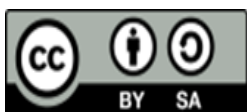
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ABSTRACT

Some village officials want to adjust the direction of the Qibla, but some Gampong residents oppose the plan because residents believe that the direction of the Qibla has been determined by previous generations of scholars. This study will investigate the approach used when the determination of the direction of the Qibla was first carried out, as well as the approach used after the revision in 2017. Qualitative field research (field research) and library research (library research) used descriptive, analytical, and verification approaches. After that, the method of determining the direction of the Qibla of the Al-Islahiyah Mosque was described and analyzed. Furthermore, the results of the re-measurement of the current direction of the Qibla were verified using the Compass and Rasdul Qibla/Istiwa A'zam. The results show that first, the direction of the Qibla was determined at the Al-Islahiyah Mosque using two methods: Rasdul Qibla/Istiwa A'zam on May 28, 2015 and the Compass tool in 2017. In 1966, the direction of the Qibla was determined with a tool perpendicular to the shadow of the sun's rays before it became a Mosque and was still a Meunasah Gampong. Second, the analysis of the current Qibla direction determination method is appropriate, by following the Compass of the Baiturrahman Grand Mosque in Banda Aceh at point 292o and Rasdul Qiblat/Istiwa A'zam on May 27, 2022 at 16:18 WIB and July 16, 2022 at 16:30 WIB. The calibration results show a slight slope of 11°.

Beberapa perangkat desa ingin menyesuaikan arah kiblat, tetapi sebagian warga Gampong menentang rencana tersebut karena warga percaya bahwa arah kiblat telah ditentukan oleh generasi ulama terdahulu. Studi ini akan menyelidiki metode apa yang digunakan pada saat penetapan arah kiblat pertama kali dilakukan, serta metode apa yang digunakan setelah perbaikan pada tahun 2017. Penelitian kualitatif lapangan (penelitian lapangan) dan penelitian pustaka (penelitian pustaka) menggunakan pendekatan deskriptif, analitik, dan verifikatif. Setelah itu, metode penetapan arah kiblat Masjid Al-Ishlahiyah dideskripsikan dan dianalisis. Selanjutnya, hasil pengukuran ulang arah kiblat saat ini diverifikasi dengan menggunakan Kompas Google Earth dan Rasdul Qiblat/Istiwa A'zam. Hasil menunjukkan bahwa pertama, arah kiblat ditetapkan di Masjid Al-Ishlahiyah dengan dua metode: Rasdul Qiblat/Istiwa A'zam pada 28 Mei 2015 dan alat Kompas pada 2017. Pada tahun 1966, arah kiblat ditetapkan dengan alat tegak lurus dengan bayangan sinar matahari sebelum menjadi Masjid dan masih merupakan Meunasah Gampong. Kedua, analisis metode penetapan arah kiblat saat ini sudah sesuai, dengan mengikuti Kompas Masjid Raya Baiturrahman Banda Aceh pada titik 292° dan Rasdul Qiblat/Istiwa A'zam pada tanggal 27 Mei 2022 pukul 16:18 WIB dan 16 Juli 2022 pukul 16:30 WIB. Hasil pengkalibrasian menunjukkan sedikit kemiringan 11°.

1. INTRODUCTION

Ilmu Falak is a science that discusses the trajectories of celestial bodies, such as the Sun, Moon, Stars, Earth, and other celestial objects, with the aim of determining the positions of these celestial bodies (practical astronomy). Astronomy has also undergone a long development. In the science of astronomy, the issue of qibla is nothing other than a matter of direction. Where the direction aimed at when performing Salah is towards the Kaaba or towards the position of the

Kaaba.¹ By conducting calculations and measurements, the direction of the Kaaba can be determined from any point or place on the surface of the Earth. Therefore, the calculation of the Qibla direction essentially aims to determine the direction in which the Kaaba in Mecca can be seen from a specific location. Muslims must face the qibla when performing prayers because it is a valid condition for performing both obligatory and voluntary prayers, except in certain cases. If one does not face the qibla, the prayer is invalid according to Islamic jurisprudence. Scholars have also agreed that facing the qibla is one of the valid conditions for prayer. As established in the Qur'an, Sunnah, and Ijma'.²

The consensus among the scholars is that for those who can see the Kaaba, it is obligatory to face the Kaaba itself, meaning to face the Kaaba directly. Meanwhile, for those who cannot see the Kaaba or are far from it, the scholars also have differing opinions. The majority of scholars believe that it is sufficient to face the direction of the Kaaba. then the Shafi'i school holds that it is obligatory for those far from Mecca to face the Kaaba, meaning to turn towards the Kaaba as it is obligatory for those who witness the Kaaba.³

The direction of the Qibla according to the MUI Fatwa Number 5 of 2010 is facing Northwest with an inclination that varies according to the geographical location of the area where the Mosque or Mushalla is situated, due to Indonesia's position not being directly to the east of the Kaaba but rather to the southeast.⁴ According to the Science of Astronomy or Geographical Science, if viewed based on a compass rose map, Indonesia is located between the Southeast of the Kaaba, so its Qibla direction points towards the Northwest. In the calculations of Astronomy or Astronomy, a shift of 1° can result in a deviation from the Kaaba direction of approximately 111 kilometers from the specified

¹Abdullah Ibrahim, "Ilmu Falak Antara Fiqih dan Astronomi", *Yogyakarta: Fajar Pustaka Baru*, cet. 1 January (2017), hal. 19.

²Mohd. Kalam Daud, "Ilmu Falak Syar'i (Fiqih Dan Hisab Arah Kiblat, Waktu Shalat Dan Awal Bulan Kamariah", *Fakultas Syariah Dan Hukum: cet 1*, (2014), hal. 32.

³Watni Marpaung, "Pengantar Ilmu Falak", *Jakarta: Kencana*, cet 1, Oktober (2015), hal. 59-60.

⁴Ismail Ismail, "Urgensi Dan Legitimasi Fatwa Majelis Permusyawaratan Ulama Aceh Nomor 3 Tahun 2018 Tentang Penetapan Arah Kiblat," *Al-Manahij: Jurnal Kajian Hukum Islam* 14, no. 1 (June 2, 2020): 87-98, <https://doi.org/10.24090/MNH.V14I1.3669>.

point. The greater the deviation, the further the direction will be from the intended target. Therefore, if Indonesia's Qibla direction points to the Northwest, which is 45° on the circular arc between West and North, it will result in a deviation towards Afghanistan and Azerbaijan instead of pointing to the Kaaba.

The issue of determining the Qibla direction remains a topic of debate among the Muslim community to this day. As happened in one of the mosques in the city of Banda Aceh, specifically in the village of Lambhuk, Ulee Kareng District, named Al-Ishlahiyah Mosque. Where this mosque is one of the mosques that has experienced inaccuracies in the direction of the qibla. Masjid Al-Ishlahiyah is one of the mosques that was built in 1966. This mosque originally started as a Meunasah in the courtyard. The Meunasah was a place of study led by Tgk H. Muhammad Shaleh (d. 1999), who, besides being a prominent scholar in Lambhuk, was also a senior teacher at the Al-Ishlahiyah Islamic boarding school in the Lambhuk village, Jl. T Iskandar. In the 1980s, the Meunasah was transformed into a mosque.

After the completion of the mosque construction, in 2015, a dispute arose regarding the adjustment of the Qibla direction, where several residents of Gampong Lambhuk, Ulee Kareng District, Banda Aceh, sealed the local Keucik's office on Thursday, May 28, 2015, around 4:30 PM WIB, after raising the issue that the Qibla direction of the Al-Ishlahiyah Mosque in the Gampong would be adjusted according to the agreement with the Tuha Peut and local Gampong officials. Because there were some residents who opposed the adjustment of the qibla direction, meanwhile, the head of Lambuk, M. Nasir Ibrahim, wanted to adjust the qibla direction. Until that time, the residents still believed that the qibla direction of Al-Ishlahiyah Mosque did not need to be adjusted, because the qibla direction had already been determined by previous generations of scholars since the mosque was established.⁵

Thus, the fact is very interesting to be further researched based on several objectives that the author intends to investigate regarding the Method of Determining the Qibla Direction of the Mosque. (Analisis Terhadap Penetapan Arah Kiblat Masjid Al-Ishlahiyah Gampong Lambhuk Kec. Ulee Kareng Kota Banda Aceh).

⁵Ismail Ismail, "Standar Operasional Prosedur (SOP) Kalibrasi Arah Kiblat Masjid Di Era Digital," *Al-Marshad: Jurnal Astronomi Islam Dan Ilmu-Ilmu Berkaitan* 5, no. 1 (2019): 90-110, <https://doi.org/10.30596/jam.v5i1.3126>.

2. METHOD

In this study, the author uses a type of field research and library research, with descriptive-analytical and verificative methods. describing and analyzing the method of determining the Qibla direction of Al-Ishlahiyah Mosque, then re-verifying the current Qibla direction measurements using a compass, Google Earth, and Rasdul Qiblat/Istiwa A'zam. This research uses data collection techniques that consist of interviews, observations, documentation, and literature study.

The primary data source is data related to the method of determining the Qibla direction at Al-Ishlahiyah Mosque, Gampong Lambhuk, Ulee Kareng District, Banda Aceh City. Namely, to accurately determine the Qibla direction using the Compass and Rashdul Qibla methods, interviews were also conducted to understand the history of the Qibla direction determination at the Lambhuk Mosque, Ulee Kareng District, Banda Aceh City. Secondary data on the concept of determining the Qibla direction in Islam and the legal foundations related to the Qibla direction. which the author also found in the Qur'an Surah Al-Baqarah (2) verses 144, 148, 149, and 150. in books, such as the book Al-Umm by Imam Asy-Syafi'i, the book Shahih Bukhari by (Muhammad Ibn Ismail Bukhari), the book Al-Lu'lu' wal Marjan by Shahih Bukhari Muslim, the book Sunan Al-Thirmidzi by Imam Al-Thirmidzi, the book Shahih Muslim bi Syarh An-Nawawi by Imam An-Nawawi, the book Tafsir Al-Ahkam by Abdul Halim Hasan, the book Rawaih Al-Bayan fi Tafsir Al-Ayah Al-Quran, and the book Shahih Bukhari by Abu Abdillah Muhammad bin Ismail bin Ibrahim ibn Al-Mughirah bin Bardazbah Al-Bukhary.

3. RESULTS AND DISCUSSIONS

Understanding and Legal Basis of Qibla Direction

Linguistically, the word "kiblat" comes from Arabic, specifically the word قِبْلَة, which is one of the forms of the root (derivation) of قَبَلَ, يَقْبَلُ, meaning to face. Its synonym is وَجْهَة, which comes from the word مَوَاجِهَة, meaning the state of the direction faced. Then its meaning is specifically directed towards a direction, where everyone who performs prayer faces it.⁶ As mentioned in the Qur'an, the word Al-

⁶Rohi Baalbaki, "Al-Maurid Al-Waseet", *Bairut: Libanon*, (2004), hal.

Kiblat also appears four times, which is interpreted as both direction and place of prayer.⁷

Several experts in astronomy define the direction of the Qibla as follows: 1). Slamet Hambali, the Qibla direction is towards the Kaaba (Mecca) via the nearest route, which every Muslim must face when performing prayers.⁸ 2). Ahmad Izzuddin defines facing the Qibla as facing the direction of the Kaaba or at least the Masjid al-Haram, taking into account the direction and the nearest position calculated from the area we desire. 3). Muhyiddin Khazin, the qibla is the direction or the shortest distance along a great circle that passes through the Kaaba (Mecca) and the location of the city in question.⁹ 4). Abdul Aziz Dahlan defines Kiblat as the direction that Muslims face or the Kaaba building when performing worship.¹⁰ 5). Harun Nasution, the qibla as the direction to face during prayer times.¹¹ 6). Fachruddin in the Encyclopedia of the Qur'an explains that the Qibla is the direction that Muslims face wherever they are when performing obligatory or Sunnah prayers. The Qibla that Muslims face is the Kaaba, located in the center of the Masjid al-Haram in the city of Mecca, which was built by the Prophet Ibrahim and the Prophet Ismail. From several definitions according to the scholars mentioned above, essentially, they all refer to the direction towards the Kaaba (Mecca) from the respective city when performing worship.

Legal Basis for Facing the Qibla

As for the legal basis for facing the Qibla in the Qur'an Surah Al-Baqarah [2]:144, 149 dan 150:

⁷Achmad Jaelani dkk, "Hisab Rukyat Menghadap Kiblat", (Fiqih, Aplikasi, Praktis, Fatwa Dan Software, Semarang: PT Pustaka Riski Putra, (2012), hal. 2

⁸Slamet Hambali, "Ilmu Falak I (Tentang penentuan Awal Waktu Shalat dan Penentuan Arah Kiblat Di Seluruh Dunia)", Semarang : Program PascaSarjana IAIN Walisongo Semarang, (2011), hal. 167.

⁹Muhyiddin Khazin, "Ilmu Falak dalam Teori Praktik (Perhitungan Arah Kiblat, Waktu Shalat, Awal Bulan, dan Gerhana)", Yogyakarta : Buana Pustaka, (2008), hal. 50.

¹⁰Abdul Aziz Dahlan, "Ensiklopedi Hukum Islam", Jakarta: PT. Tiar Baru Van Hoeve, Cet. 1., (1996), hal. 944.

¹¹Harun Nasution, "Ensiklopedi Hukum Islam", Jakarta: Djambatan, hal. 563.

قَدْ نَرَى تَقَلُّبَ وَجْهِكَ فِي السَّمَاءِ فَلَنُوَلِّيَنَّكَ قِبْلَةً تَرْضَاهَا ۚ فَوَلِّ وَجْهَكَ شَطْرَ الْمَسْجِدِ
الْحَرَامِ ۚ وَحَيْثُ مَا كُنْتُمْ فَوَلُّوا وُجُوهَكُمْ شَطْرَهُ ۚ وَإِنَّ الَّذِينَ أُوتُوا الْكِتَابَ لَيَعْلَمُونَ أَنَّهُ الْحَقُّ
مِنْ رَبِّهِمْ ۗ وَمَا اللَّهُ بِغَافِلٍ عَمَّا يَعْمَلُونَ

Indeed, we often see your face turning towards the sky, so We will certainly turn you towards a qiblah that you will be pleased with. Turn your face towards the Masjid al-Haram. And wherever you are, turn your face towards it. And indeed, the people (Jews and Christians) who were given the Book (Torah and Gospel) know that turning towards the Masjid al-Haram is the truth from their Lord; and Allah is never unaware of what they do. (QS. Al-Baqarah [2]: 144)

Then in another verse,

وَمِنْ حَيْثُ خَرَجْتَ فَوَلِّ وَجْهَكَ شَطْرَ الْمَسْجِدِ الْحَرَامِ ۚ وَإِنَّهُ لَلْحَقُّ مِنْ رَبِّكَ ۗ وَمَا اللَّهُ بِغَافِلٍ
عَمَّا تَعْمَلُونَ

“And from wherever you come (or go), turn your face towards Masjid al-Haram, for this is indeed a rightful command from your Lord. And Allah is never unaware of what you do.” (QS. Al-Baqarah [2]: 149).

وَمِنْ حَيْثُ خَرَجْتَ فَوَلِّ وَجْهَكَ شَطْرَ الْمَسْجِدِ الْحَرَامِ ۚ وَحَيْثُ مَا كُنْتُمْ فَوَلُّوا وُجُوهَكُمْ
شَطْرَهُ ۚ لَيْسَ لَكَ يَكُونُ لِلنَّاسِ عَلَيْكُمْ حُجَّةٌ إِلَّا الَّذِينَ ظَلَمُوا مِنْهُمْ فَلَا تَخْشَوْهُمْ وَاخْشَوْنِي ۚ وَلَا تَمَّ
نِعْمَتِي عَلَيْكُمْ وَلَعَلَّكُمْ تَهْتَدُونَ

“And wherever you (go out), turn your face towards the Masjid al-Haram. And wherever you (all) are, turn your face towards it, so that there will be no argument for people against you, except for the wrongdoers among them. So do not fear them, but fear Me. (saja). And so that I may perfect My favor upon you, and so that you may be guided.”. (QS. Al-Baqarah [2]: 150).

Then the basis in the Hadith narrated by Imam Bukhari and Muslim:

عَنْ أَبِي هُرَيْرَةَ رَضِيَ اللَّهُ عَنْهُ قَالَ: قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ: فَإِذَا قُمْتَ إِلَى الصَّلَاةِ فَاسْبِغِ الوُضُوءَ ثُمَّ اسْتَقْبِلِ الْقِبْلَةَ فَكَبِّرْ (رواه البخارى ومسلم).

"If you intend to perform prayer, then complete your ablution, face the Qibla, and say the Takbir". (HR. al-Bukhari Muslim)¹²

قَالَ أَبُو هُرَيْرَةَ: قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ: اسْتَقْبِلِ الْقِبْلَةَ وَكَبِّرْ (رواه البخاري)

Abu Hurairah said: "The Prophet (peace be upon him) said: Face the Qibla and say Takbir". (HR. Bukhari).¹³

The Jurisprudential Opinions of the Four Schools of Thought on the Qibla Direction

There is no difference of opinion among scholars that facing the qibla is a condition for the validity of prayer except in certain circumstances, but the difference of opinion among scholars lies in whether the qibla is "the direction of the Kaaba" or "the direction of the Kaaba".¹⁴

a. Madzhab Asy-Syafi'i

Having 3 principles to meet the requirements of facing the Qibla, namely: 1). Facing the Qibla with certainty (qiblat al-yaqin). A person who is in Masjid al-Haram and sees the Ka'bah directly must face the Qibla with full certainty. This obligation can be confirmed beforehand by seeing or touching it for blind individuals. Whereas for someone who is inside the Kaaba building itself, their qibla is the wall of the Kaaba. 2). Estimated qibla (qiblat az-zann) For someone who is far from the Kaaba, such as being outside the Masjid al-Haram or around the holy land of Mecca and cannot see the Kaaba, they are required to face the direction of the Masjid al-Haram as an intention to face the qibla direction based on estimation or assumption. 3). The qibla that is sought with great effort (qiblat ijtiḥad) Ijtihad for the direction of the Qibla is used by someone who is outside the holy land of Mecca or even outside the Kingdom of Saudi Arabia. For those who do not know the direction of the qibla and

¹²Abu Abdillah Muhammad bin Ismail bin Ibrahim ibn al-Mughirah bin Bardazbah al-Buhkary, *Shahih al-Bukhari*, (Kairo: Dar al-Hadis, Juz 1, 2004), p 11.

¹³Muhammad Ibn Ismail Bukhari, *Shohih al-Bukhâri*, (Bairut : Dâr al-Kutub al 'Ilmiyah, hadis: 403, Juz 1, 1992), p. 130

¹⁴Muthmainnah, *Pemanfaatan Sais Dan Teknologi Dalam Pengukuran Arah Kiblat Di Indonesia*, (Ulumuddin: Journal Ilmu-ilmu Keislaman, Vol. 10, No. 2, 2020), : 154.

cannot estimate it, they may face any direction they believe to be the qibla. However, for those who can estimate it, they are obliged to make ijtihad regarding the direction of the qibla.¹⁵

Imam Syafi'i in the book *Al-Umm* also explains:¹⁶

قَالَ الشَّافِعِيُّ: وَمَنْ كَانَ فِي مَوْضِعٍ مِنْ مَكَّةَ لَا يَرَى مِنْهُ الْبَيْتُ، أَوْ خَارِجًا عَنْ مَكَّةَ، قَالَ يَحِلُّ لَهُ أَنْ يَدْعَ كُلَّمَا أَرَدَ الْمَكْتُوبَةَ أَنْ يَجْتَحِدَ فِي طَلَبِ صَوَابِ الْكَعْبَةِ بِالذَّلَائِلِ مِنَ النُّجُومِ، وَالشَّمْسِ، وَالْقَمَرِ، وَالْجِبَالِ، وَمَهَبِ الرِّيحِ، وَكُلِّ مَا فِيهِ عِنْدَهُ دَلَالَةٌ عَلَى الْقِبْلَةِ

“That Imam Asy-Syafi'i said: whoever is in a place in Makkah where they cannot see the Kaaba, or outside of the Kaaba, it is not permissible for them to write anything they desire, as they should strive to find the truth about the Kaaba with several proofs from the stars. The sun, the moon, the mountains, the blowing wind, and everything that indicates the qibla.”

b. Madzhab Maliki and Hanafi¹⁷

Imam Hanafi in his book *Bada'i Sana'i fi Tartib Asy-Syara'i*, establishes that a person praying is in one of two states: either praying while able to face the Qibla or praying while unable to face the Qibla. If one is able to face the Qibla or see the Kaaba, it is obligatory for them to face the exact Kaaba (the Kaaba building); if they do not do so, their prayer is invalid. As for those who are unable to face or see the Kaaba, it is obligatory for them to direct their faces towards the Kaaba (Jihanul Kaabah), which are the signs indicating the direction of the Kaaba. However, as long as one has the ability to turn their face towards the Kaaba, it is obligatory to do so.¹⁸

¹⁵Muhammad Adieb, “Hukum Penentuan Perspektif Madzhab Syafi’i dan Astronomis”, *Jurnal Inklusif: jurnal pengkajian penelitian ekonomi dan hukum islam*, Vol. 4, No. 1, (2019), hal. 38.

¹⁶Muhammad bin Idris Asy-Syafi'i, “*Al-Umm*”, (*Daarul Wafa'*, Juz 2), hal. 212

¹⁷Muhammad Ali As Shabuni, “Tafsir Ayat Ahkam As Shabuni”, *Surabaya: Bina Ilmu*, (1983), hal. 82.

¹⁸Muhammad Hadi Bashori, “Pengantar Ilmu Falak”, *Jakarta: Pustaka Al-Kautsar*, Cet. 1. (2015), hal. 92.

c. Madzhab Hambali

He believes there are 4 states for a person facing the Kaaba, namely: ¹⁹ 1). A person who is very certain is someone who can see the Kaaba building directly or is a local resident, so they are sure to face the Kaaba even if it is covered by a fence or wall, and it is mandatory for them to face the Kaaba building directly. 2). A person who might be near the Kaaba but does not see the Kaaba and does not know the direction of the Kaaba building. Like a foreigner who receives information from someone else about the direction of the Qibla, and it is also obligatory for him to follow that information because he truly does not know. 3). A person who must exercise ijtihad in determining the qibla, where they are not in the two previous conditions and they have signs to know the qibla, then they are obliged to exercise ijtihad. 4). A blind person or a person who does not have the ability to exercise ijtihad to find the qibla but is in a different condition from the first and second conditions, then they are obliged to follow the taqlid of the mujtahid.

Various Methods for Determining the Qibla Direction

The methods for determining the direction of the Qibla in Indonesia have undergone significant development, considering the great distance from the Kaaba. Its measurement in precise and accurate estimates to avoid deviations needs to be carried out. so that the direction of prayer remains in accordance with the Qur'an Hadith and the study of Astronomy and Astrophysics. In accordance with the history of determining the Qibla direction in Indonesia, according to Slamet Hambali, there are five methods of measuring the Qibla direction that have developed in Indonesia, namely using the Istiwa stick, Compass, Global Qibla Indicator, Local Qibla Indicator, and Theodolite. ²⁰

- a. The Equatorial Stick is an ordinary stick planted upright on a flat surface in an open area. (sinar Matahari tidak terhalang). Its use is to determine the direction accurately by connecting two points (the distance from both points to the stick must be the same) from the tip of the stick's shadow when the Sun is in the East to the tip of the shadow after the Sun has moved to the West. In ancient times, this stick was known as a Gnomon.²¹

¹⁹Mohd Kalam Daud, *Ilmu Falak Syar'I*, 47.

²⁰Slamet Hambali, "Metode Pengukuran Arah Kiblat Dengan Segitiga Siku-Siku Dari Bayangan Matahari Setiap Saat", *Tesis: IAIN Wali Songo: Tidak diterbitkan*, (2010), hal. 17.

²¹ Slamet Hambali, 2010

- b. b. A compass is a device that indicates the cardinal directions using a needle. The compass needle is made of magnetic metal and is mounted in such a way that it easily moves to indicate the north direction, but the north direction it shows is not the true north (the North Pole), and the compass declination itself always changes depending on the position and time. Therefore, measuring the direction of the qibla using a compass requires precision and accuracy, considering that the compass needle is sensitive to magnetic forces.²²
- c. Rashdul Qiblat is one of the methods where the sun is directly above the city of Mecca (Kaaba). Thus, the shadow formed at that time points towards the city of Mecca (Masjidil Haram or Kaaba). This condition is utilized to measure or check the direction of the mosque's qibla for areas that experience daytime simultaneously with the city of Mecca by adjusting Mecca's time to the time of that area or city. Rashd al-Qiblah occurs twice every year, namely when the sun rises to the north and when it descends to the south. The event occurs on May 28 at 12:18 Mecca time (16:18 WIB) and on July 16 at 12:27 Mecca time (16:27 WIB) for regions in western Indonesia. In leap years, the global Rashd al-Qiblah is observed one day later. Therefore, it can be stated that the global Rashd al-Qiblah becomes May 29 and July 17.
- d. Mizwala Qibla Finder (MQF) is a modified instrument from a sundial to a gnomon used specifically to determine the direction of the Qibla. this tool has a dial field to capture sunlight produced by the gnomon or stick.
- e. Theodolite is one of the tools used to measure horizontal angles (Horizontal Angle=HA) and vertical angles (Vertical Angle=VA). This tool is widely used as a mapping device in geological and geodetic surveys. The theodolite is considered the most accurate tool among existing methods for determining the direction of the qibla. With the help of

²²Muhyiddin Khazin, "Kamus Ilmu Falak", *Yogyakarta: Pustaka Pelajar*", (2005), hal. 31.

GPS satellites, the theodolite can indicate a position up to an arc-second unit ($1/3600$).²³

Accuracy in Determining the Qibla Direction

In determining the direction of the qibla, Thomas Djamaluddin, an Indonesian astronomy expert, has a different perspective from some astronomers like Slamet Hambali. While some astronomers argue that calculations and measurements must point directly to the Kaaba building or at least the city of Mecca, especially for those living far away and unable to see the Kaaba, such as in Indonesia, Thomas Djamaluddin believes that someone who intends to pray should indeed strive to face the qibla.²⁴ However, if there is a deviation of up to 2 degrees, it can still be tolerated because, in his opinion, such a deviation is not too significant when viewed from the position of the person praying and the width of the prayer rows in mosques in general.

Thomas Djamaluddin explained that for astronomical objects like stars, the object point and the direction from the observer's point are the same. In the application of determining the Qibla direction, he argues that the main reference should be taken from the position of the person praying or the location of the place of worship, not from the Ka'bah point. The deviation observed should only be viewed from the position of the person or the place of worship, not from the Ka'bah point. If the Ka'bah point is used as the main consideration in measuring deviations, then this will become very difficult, especially for those who are in distant locations. Determining the direction of the qibla at a location requires very high precision.

Mathematically, an error of 1 degree in the actual direction for a location 1000 kilometers away from the Ka'bah can result in a deviation of about 1.75 kilometers from the correct direction. The farther the distance from the Ka'bah, the greater the influence of angular deviation on the misalignment of the qibla direction. Therefore, calculations with very high accuracy and precision are required. Here is the table of Qibla direction deviations:

²³Nur Nillawati, "Akurasi Arah Kiblat Masjid Desa Pallantikan Kecamatan Bangkala Kabupaten Jenepono", *Fakultas Syariah Hukum UIN Alauddin Makassar*, (2021), hal. 44.

²⁴Dewi Rahayu and Laiyina Ukhti, "Uji Akurasi Arah Kiblat Menggunakan Azimut Bulan Purnama," *Astroislamica: Journal of Islamic Astronomy* 1, no. 1 (June 30, 2022): 01-20, <https://doi.org/10.47766/ASTROISLAMICA.V1I1.681>.

Table 1. List of deviations in the direction of the Qibla ²⁵

No.	Deviation in Degree	Deviation in Kilometers
1.	1'	1,85
2.	5'	9,26
3.	15'	27,78
4.	30'	55,56
5.	45'	83,34
6.	1°	111,13
7.	2°	222,26
8.	3°	333,39
9.	4°	444,52
10.	5°	555,65

Source: Muhammad Kalam Daud, Ilmu Falak Syari Fiqih dan Hisab Arah Kiblat, Faculty of Sharia Law UIN Ar-Raniry

Method for Determining the Qibla Direction of Al-Ishlahiyah Mosque, Gampong Lambhuk, Ulee Kareng District, Banda Aceh City

a. Pre-Construction of the Mosque

It started from a small hut that was later built into a Meunasah by Tgk. H. Muhammad Shaleh in 1966. At that time, a very simple tool was used, namely a stick that was illuminated by sunlight to determine the direction of the Qibla on the stick, indicated by the shadow of the sunlight. Because at that time there were very few tools for measuring the direction of the Qibla. Until the 1980s, when the construction of a mosque at the meunasah took place. When the mosque was built, the meunasah was not demolished, but the mosque was built around the meunasah. After the first floor of the mosque was finished being poured, the meunasah was then demolished to build the mosque's mihrab. There was no re-measurement when the mosque was built, but the direction of the qibla was still aligned with the qibla direction of the meunasah.²⁶

²⁵Muhammad Kalam Daud, “Ilmu Falak Syari Fiqih Dan Hisab Arah Kiblat, Waktu Shalat dan Awal Bulan Kamariah)”, *Fakultas Syariah dan Hukum*, (2014), hlm. 43

²⁶Wawancara Kepada Bapak Rustam AB, Geucik Gampong Lambhuk, 19 Januari (2022).

b. POST Mosque Construction

After the mosque was built, precisely in 2015, a dispute arose regarding the adjustment of the qibla direction. where a number of residents of Gampong Lambhuk, Ulee Kareng District, Banda Aceh, sealed the local Keucik's office on Thursday, May 28, 2015, around 4:30 PM WIB, after raising the issue that the qibla direction of the Al-Islahiyah Mosque in the Gampong would be adjusted according to the agreement reached by the Tuha Peut and several local Gampong officials. and there were some residents who opposed the adjustment of the qibla direction, while the desire of Keucik Lambuk M. Nasir Ibrahim at that time was to adjust the qibla direction. However, some residents still believe that the direction of the Qibla of Al-Islahiyah Mosque does not need to be adjusted, because the Qibla direction was determined by previous generations of scholars since the mosque was established.

Muswadi Mustafa said that the exact cause of the shift in the direction of the qibla is not clearly known, but he mentioned that it is likely due to a natural phenomenon or the Aceh Tsunami in 2004, which he believes caused the shift, similar to what happened to the Al-Islahiyah Mosque.²⁷

Thahar M. Amin also said the same thing, that it is not clearly known where the initial cause of the shift in the direction of the qibla began, whether it was due to the tsunami that occurred a few years ago or if it had indeed shifted since the mosque was first built. It was also carried out by the Mosque Prosperity Board (BKM) of Al-Islahiyah Mosque in Gampong Lambhuk regarding Rashdul Qiblat/Istiwa A'zam, where at that time it was a method of measuring the direction of the qibla using sunlight directly above the Kaaba (Rasd hul Al-Qiblat) at certain times, which was conducted on May 28. This method successfully determined the direction of the qibla, but some members of the community still doubted the direction, and it was also not approved by some local villagers.²⁸

Finally, after there were differences regarding the direction of the qibla, in 2017, the village officials of Gampong Lambhuk and the officials of the BKM Mosque held a meeting and a joint measurement conducted by experts in astronomy, attended by the Ministry of

²⁷Wawancara Bersama Bapak Muswadi Musthafa, Sekretaris Desa Gampong Lambhuk, 27 Juni (2022)

²⁸Wawancara Bersama Bapak Thahar M. Amin, Sekretaris Badan Kemakmuran Masjid (BKM) Masjid Al-Islahiyah Gampong Lambhuk, 28 Juni (2022)

Religious Affairs of Aceh. They conducted the measurement using a compass based on the qibla direction of the Baiturrahman Grand Mosque in Banda Aceh. It was then agreed by everyone that the determination of the qibla direction for the Al-Ishlahiyah Mosque would be based on the qibla direction of the Baiturrahman Grand Mosque in Banda Aceh, which is precisely at the point of 292° .²⁹

And previously, the determination of the qibla direction for Al-Ishlahiyah Mosque was not done through direct calculations or measurements at the mosque location, but rather through a consensus reached in a meeting that the qibla direction for Al-Ishlahiyah Mosque would be based on the compass of Baiturrahman Grand Mosque in Banda Aceh. It is feared that the direction of the qibla does not point directly to the Kaaba. Because the distance between the Baiturrahman Grand Mosque in Banda Aceh and the Al-Ishlahiyah Mosque is very far, namely 3.2 kilometers.

Analysis of the Determination of the Qibla Direction for Al-Ishlahiyah Mosque, Gampong Lambhuk, Ulee Kareng District, Banda Aceh City

In the research, it was found that there was no measurement or recalculation at the time the mosque was built. However, the determination of the Qibla direction was adjusted to the Qibla direction of the previous Meunasah building by using a vertical object that cast a shadow from the sun's rays. Meanwhile, the method used after the change in the qibla direction of the Al-Ishlahiyah Mosque in Gampong Lambhuk was by using Rasdul Qiblat/Istiwa A'zam and a compass. The second method is already in accordance with and correct in general with the qibla direction determination methods available in Indonesia. After the implementation of the two methods, namely Rasdul Qiblat/Istiwa A'zam and the compass, the researcher calibrated, measured, and recalculated using these two methods.³⁰

²⁹Wawancara Bersama Bapak Thahar M. Amin, Sekretaris Badan Kemakmuran Masjid (BKM) Masjid Al-Ishlahiyah Gampong Lambhuk, 27 Juni (2022).

³⁰Cut Nazar Mutia Hanum and Ismail Ismail, "Pandangan Tokoh Agama Jungka Gajah Terhadap Arah Kiblat Bagi Orang Yang Jauh Dari

a. Accuracy Using a Compass

The researcher attempted to use the Qibla direction tool on the Sajda application on a smartphone. The author placed the Sajda application on the smartphone inside the Al-Ishlahiyah Mosque in Gampong Lambhuk. The Qibla direction obtained from the Sajda application was the same as the Qibla direction in the Al-Ishlahiyah Mosque in Gampong Lambhuk.

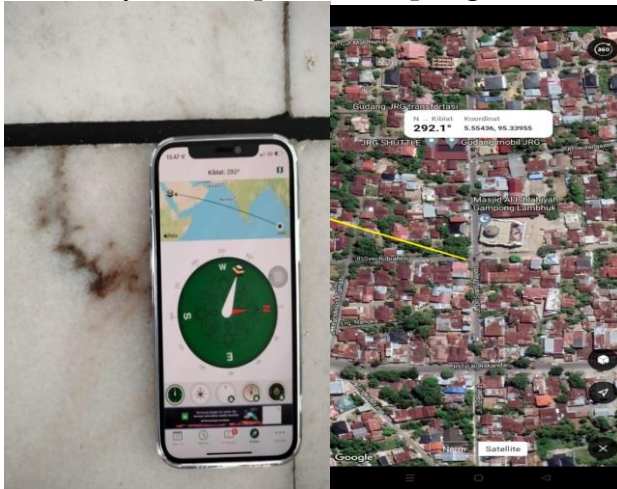


Image: Qibla Direction Based on a Compass at Al-Ishlahiyah Mosque, Gampong Lambhuk

Found in the two images above. Where both point to 292°. The thick black line is the line of prayer rows in the Al-Ishlahiyah Mosque in Gampong Lambhuk that indicates the direction of the qibla, and the yellow line in the adjacent image also indicates the direction of the qibla located at 292.1°.

b. Accuracy Using Google Earth

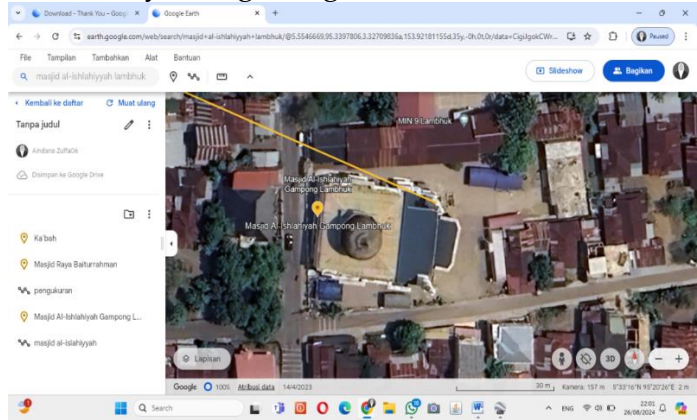


Image: Accuracy of Al-Ishlahiyyah Mosque using Google Earth

The image above shows that the Al-Ishlahiyyah mosque building is not aligned in a straight line towards the Kaaba. The yellow line points exactly at the mosque's pillars, and if the angles between the pillars are parallel, the rows in the mosque will also align with the Kaaba. However, this is not the case here, meaning that the mosque, when viewed from its structure, is no longer accurately oriented towards the Kaaba. Here is the comparison with the Baiturrahman Mosque building in Banda Aceh.

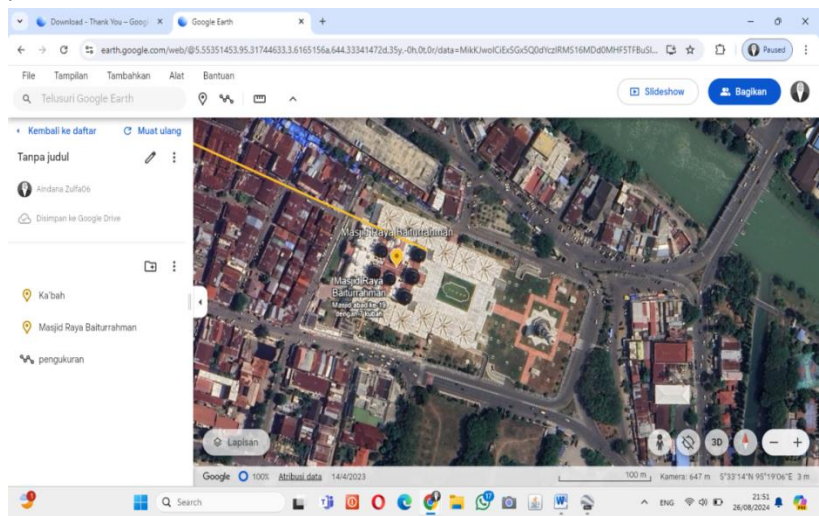


Image: Accuracy of Baiturrahman Mosque Banda Aceh with Google Earth

c. Accuracy Using Rasdhul Al-Qiblat/Istiwa A'zam

Conducting the calibration of the Qibla direction on May 27, 2022, at 4:18 PM WIB and the calibration of the Rashdul Qiblat on July 16, 2022, at 4:27 PM WIB. Below are the images of the Qibla direction calibration with Rashdul Qiblat.



Image: Calibration Results Using Rashdul Qiblat/Istiwa A'zam, Date: May 27, 2022, at 16:18 WIB.

Taking a position on the right side of the mosque terrace, where the terrace is part of the old building aligned with the previous qibla direction. The tile/floor lines represent the previous qibla direction that corresponds with the rows inside the mosque. After we observed that the shadow of the object, namely the marker, is slightly tilted to the right, it indicates that the direction of the mosque's qibla has shifted slightly and is not yet optimal.

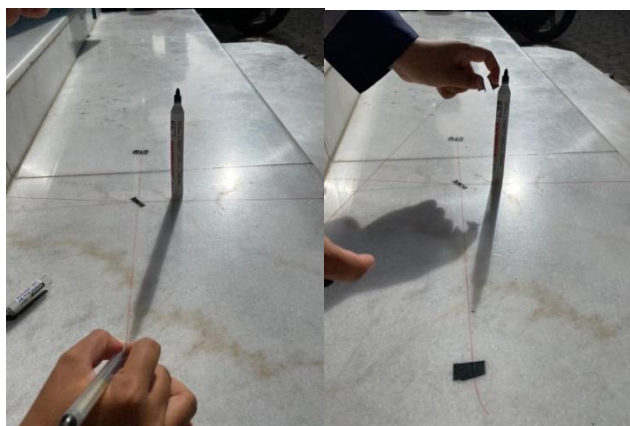


Image: Calibration Results using Rasdhul Qiblat on July 16 at 16:30

This image contains horizontal thread lines, which are lines on the prayer rows that are drawn straight and aligned with the prayer rows inside the mosque, while the vertical thread lines are lines used to obtain a right angle so that the degree of inclination obtained from the direction of the mosque's qibla can be adjusted.

From the two results of the Qibla direction above, it can be seen that the Qibla direction is slightly less inclined to the right. And the author found a slight tilt at the Al-Ishlahiyah Mosque, where the researcher found a slight tilt in degrees, which is 11 degrees. Here is the tilt in degrees:



Gambar 3.5. Kemiringan Dalam Derajat

This image is a continuation of the previous image, where the previous image shows the tilt in degrees. The results of the

researchers' observations and measurements indicate an 11-degree tilt to the right from the current direction of the Qibla. Whereas the current direction of the qibla is a straight line forward. (vertikal). Meanwhile, the thread line on the marker object is the result of Rasdul Qiblat on the shadow of the Sun. The conclusion from the calibration results of the two methods above is that the method of the Al-Ishlahiyah Mosque Compass in Gampong Lambhuk is already appropriate.

The conformity is at the point 292° based on the Raya Baiturrahman Mosque in Banda Aceh, which the researcher conducted on July 24, 2022, as shown in figure 7 above. However, in the Rasdul Qiblat/Istiwa A'zam method, there is a slight tilt of 11 degrees to the right from the current direction of the Qibla. What the author did on May 27, 2022, at 4:18 PM WIB and on July 16 at 4:30 PM WIB.

4. CONCLUSION

The method of determining the qibla direction at Al-Ishlahiyah Mosque in Gampong Lambhuk, Ulee Kareng District, Banda Aceh City, was carried out in two ways: first, with Rasdul Qiblat/Istiwa A'zam on May 28, 2015; second, with a compass in 2017. Before it became a mosque and was still a village prayer hall, the qibla direction there was determined using a stick and the shadow of the sun in 1966.

Analysis of the method for determining the Qibla direction of the Al-Ishlahiyah Mosque in Gampong Lambhuk, Ulee Kareng District, Banda Aceh City, using a compass method is already appropriate. Its alignment is based on the Compass of the Baiturrahman Grand Mosque in Banda Aceh, which is located at the point 292°, conducted by the researcher on July 24, 2022. Then, using the Rasdhul Qiblat/Istiwa A'zam method, the researcher conducted measurements on May 27, 2022, at 16:18 WIB and July 16, 2022, at 16:30 WIB. It was found that there was a slight difference in the calibration results of the Qibla direction at the Al-Ishlahiyah Mosque. namely, the tilt reaches 11 degrees from the current qibla direction.

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