

Determining Qibla Direction of Mosques in Jambi Province: Method, Conflict, and Resolution

Zufriani¹, Suhar AM², Hermanto Harun³

¹Institut Agama Islam Negeri Kerinci, Indonesia

^{2,3}UIN Sulthan Thaha Saifuddin Jambi, Indonesia

Corresponding author: zufrianistainkerinci@gmail.com

Abstract

The development of technology and science has an essential role in human life, as well as concerning worship, such as determining the Qibla direction. However, some mosques still determine the Qibla direction based on estimates or follow the Qibla direction of existing mosques so that the Qibla direction is inaccurate or does not point directly to the Kaaba. The Qibla direction of mosques in Jambi Province is measured using a compass instrument, and they believe that the Qibla direction is to the west. Astronomically, the north direction indicated by the compass is the earth's magnetic north, not true north, so it is necessary to re-measure to ensure the Qibla direction of mosques which is considered problematic to avoid conflict in the community. This paper explores the methods of determining the Qibla direction of mosques in Jambi Province. This paper aims to determine the method of determining the Qibla direction of mosques in Jambi Province. This research is normative-sociological. There are two sources of data, namely primary data and secondary data. This study took the research object in three districts, namely Kerinci Regency, East Tanjung Jabung Regency and Bungo Regency. Data collection techniques used are observation, interviews, and documentation. The data analysis technique is data condensation, data presentation, and drawing conclusions. The results of the study show that there are several methods for determining the Qibla direction of mosques in Jambi Province. Facing him is obligatory and is one of the eight conditions for the validity of prayer.

Keywords: Conflict, Jambi Province, Mosque, Qibla Direction Measurement



INTRODUCTION

Until now, the issue of determining the Qibla direction for places of worship, such as mosques and prayer rooms, still requires serious attention because being right on target when performing prayers is one of the requirements for the validity of prayers. By involving all elements, such as community leaders, clerics, the government and the Muslim community in general, it will be better to deal with the common problem of shifting the Qibla direction. Issues of the Qibla direction that are not correct, some even up to 30 degrees, make people uneasy with the Qibla direction they have been using so far, so this has a connection with the invalidity of prayer. (Wahidi & Nuroini, 2012)

Facing the Qibla in performing prayers has been contained in the Al-Quran surah *Al-Baqarah* verses 144, 149 and 150 and the hadith, and strengthened by the agreement of the majority of scholars. It has become an obligation for the *mushalli* to maximize his efforts to face the correct and accurate Qibla direction when he is about to pray. So the most important thing is an effort (*ijtihad*) in finding the right and precise direction to face Qibla.

In facing the Qibla, two things must be considered, firstly, facing the Qibla in earnest (*jihah*), and secondly, facing objectively (*ishabah*). The consequence of this is what is meant by *ijtihad*, and then there is no need to repeat the prayer when it is proven that the Qibla direction is not correct from the actual direction because it is based on genuine effort (*ijtihad*). But if the reference is the target (*ishabah*), then the prayer must be repeated if it is proven inappropriate. (Butar, 2018: 53; Wahidi & Nuroini, 2012)

The rapid development of technology and science has a vital role in human life. This fundamental thing does not escape the concept of diversity. Islam as a universal religion has the character of *shalih li kulli az-zaman wa al-makan*. Likewise, about worship, technological developments are constructive, such as in determining the Qibla direction. The problem now is how to understand to the public that facing the Qibla is an obligation in prayer. In addition, the community must equate the perception of the definition of Qibla direction, which is not uniform. The purpose of Qibla direction, which still varies according to *fiqh*, has resulted in people's understanding being different, whether they should face the *'ainul Kaaba* or the *jihah Kaaba*.

Determining the Qibla direction is now more accessible because of the rapid development of science and technology. The difficulty now lies in the common perception of the definition of Qibla direction, which is not yet uniform. The purpose of Qibla's direction, which is still varied *fiqh*, has resulted in a different understanding of the community. Recently,





there has even been a discourse that 80% of the 800,000 registered mosques/mushallas in Indonesia do not point to the Qibla and are said to be caused by plate movements, aka tectonics.

It needs to be clarified first here that the 80% figure has never been presented or published, or announced because it has never been researched nationally. However, in certain areas, there has been researching either on a sample basis or directly on the entire population. These areas, for example, are the Province of the Special Region (Daerah Istimewa Yogyakarta) of Yogyakarta (Diy.kemenag.go.id, 2012), and Rembang Regency, and from there, the figure was indeed obtained at 70-80%. It is possible to extrapolate this figure to a national scale, although it is not scientifically justifiable.

In general, to determine the Qibla direction, mosques in Jambi Province use a compass instrument, and they believe that the Qibla direction is to the west. Astronomically, the north direction indicated by the compass is the earth's magnetic north, not true north, so using a compass not pointing to true north theodolite is considered wildly inaccurate, errors can occur up to 1° (one) degree from the actual direction. Not a few also found that the method of determining the Qibla direction of the mosque was only based on an estimate of the Qibla direction of the old mosque, and the old mosque was not necessarily the exact Qibla direction. This kind of thing causes the Qibla direction of the mosque not to point directly to the Kaaba.

Several cities in Indonesia already have data on the accuracy of the Qibla direction in their respective regions, while in Jambi Province, there is very little such data.

According to Syafrizal, the Kasi Urais Regional Office of the Ministry of Religion of Jambi Province stated that:

For measuring the Qibla direction, the government is proactive, waiting for requests from the public. So it is very urgent to conduct research in the field about the Qibla direction of the people in Jambi Province to obtain valid data for the benefit of developing science and technology and as a form of scientific responsibility. (Syafrizal, 2019)

Research on the method of determining the Qibla direction has been carried out. Mikrajuddin Abdullah's investigation entitled *Practical Methods for Determining Qibla Direction and Qibla Direction Correction* provides a realistic picture of determining Qibla direction, namely using Google maps. Google Maps is a simple method of determining the Qibla direction that can be used from all directions or locations on earth. An example of the checks carried out by Mikrajuddin on two large mosques, namely the Istiqlal mosque and the Great Al Falah Mosque, showed that the Qibla direction at the two mosques was correct. The use of google maps is also very helpful for the process of building mosques, surau, and prayer rooms or for correcting the





correct Qibla direction for mosques or prayer rooms that are already standing that use google maps can also be used as a tool to determine the Qibla direction for the accuracy and accuracy of the Qibla direction.(Abdullah, 2017)

Research Muthmainnah et al. about the *Analysis of the Implementation of the Qibla Direction Movement Program for 1000 Mosques/Mushalla in Sleman Regency* is a research related to the implementation of the 1000 mosques or prayer rooms movement which socializes MUI Fatwa number 5 of 2010 concerning Qibla Direction in Sleman Regency. This study took two sub-districts as samples representing the conditions of rural and urban/urban communities. Some people in the city of Sleman rejected the changes made by still holding on to the *ijtihad* of their predecessors and considering modern technology not as a means to perfect worship but as measuring the Qibla direction. However, this is still being done because it does not change the mosque building that is already standing. It only changes the *shaff* in the mosque as a Qibla direction indicator that has changed.(Muthmainnah et al., 2019)

Mohd Kamal Daud and Ivan Sunardy's research entitled *Measurement of Qibla Direction Using Modern Tools According to the Perspective of Dayah Ulama (Case Study in Pidie District)*. The determination of the Qibla direction became a struggle that reappeared in Aceh and coincided with *yaumul rashdi*. This is in line with the findings by the Pidie Ministry of Religion Team that there are still areas where the Qibla direction does not match towards the Kaaba. This is known because it was rechecked using modern tools. However, there was a rejection by the Dayah Ulama because determining the Qibla direction was done using modern tools. The findings show that the error in the Qibla direction of the mosques and prayer rooms in Pidie Regency occurs because the determination is made using a method or method that is still traditional so that when it is rechecked in determining the Qibla direction using a more modern tool, there is an error in calculating the minutes and protractor seconds.(Daud & Sunardy, 2020)

The research entitled Utilization of Science and Technology in Measuring Qibla Direction in Indonesia by Muthmainnah and Fattah Setiawan Santoso. This research explains that the Qibla direction in Indonesia does not use the *ain Kaaba* but will use the shortest distance from Mecca from the location where the Qibla direction is calculated. The calculations used are spherical trigonometry and also the theodolite, which functions to validate the measures made when looking at the sun's shadow using the *rasyd* Qibla method. The use of modern technology is acceptable in the midst of society as a means to be able to determine the Qibla direction. Some people think that the direction of the Qibla in Indonesia is the Qibla, but if you look at it with the proper calculation, the direction of the Qibla in Indonesia is facing the Qibla, not facing Mecca. Thus, there is a need for integration between technology and also people's





understanding by slowly accepting and also using more modern tools to calculate and determine the Qibla direction according to facing Mecca or the Kaaba.(Muthmainnah & Santoso, 2020)

The main point that distinguishes this research from the studies above is the scope of the research area, namely the mosques throughout Jambi Province. In addition, this paper explores the methods of determining the Qibla direction of mosques in Jambi Province. This paper aims to determine the method of determining the Qibla direction of mosques in Jambi Province.

This research is normative-sociological. Normative research is legal research that uses secondary data sources or data obtained through library materials. At the same time, sociological research is legal research which obtains its data from primary data or data obtained directly from the community (the field). This study took the research object in three districts, namely Kerinci Regency, East Tanjung Jabung Regency and Bungo Regency. By taking three locations, it is considered to have represented Jambi Province as a whole. Data collection techniques used are observation, interviews, and documentation. The data analysis technique used is data condensation, data presentation, and drawing conclusions.(Miles et al., 2014)

DISCUSSION

Methods of Determining Qibla Direction of Mosques in Kerinci Regency

Jambi Province is located on the east coast, the central part of the island of Sumatra. Jambi Province is divided into nine regencies and two cities, and Jambi City is the provincial capital. Its geographical area is located between 0.45° – 2.45° south latitude and between 101.10° – 104.55° east longitude. According to the Central Bureau of Statistics (BPS), 95% of the population is Muslim.(Jambi.bps.go.id, 2021) So that there are lots of places of worship for Muslims in the form of mosques, prayer rooms, and violations in Jambi Province. Based on the BPS report, the number of mosques in Jambi Province in 2021 was 4257 and prayer rooms was 4162.(Jambi.bps.go.id, 2021) The location of the Qibla direction for Jambi Province is based on Islamery.com records, namely the compass direction is 294.4° with a magnetic variation of -0.2°.

In general, the Qibla direction for mosques in Kerinci Regency is determined only by using a compass and the Qibla direction, which they believe is to the west. If viewed astronomically, the north direction of the compass does not show the actual north direction, which is considered inaccurate because the error is up to 1° (one) degree from the actual direction. There were also some mosques where the Qibla direction was initially determined based on an estimate of the Qibla direction of the existing mosque, so the Qibla direction was inaccurate or did not point directly to the Kaaba. The application of determining the Qibla



direction is inseparable from the understanding of the Kerinci people. If the phenomenon is left in the direction of the Qibla, then the prayer is not facing the Kaaba. Therefore it is necessary to re-check the Qibla direction to be accurate and precise according to sharia and astronomy.

Mhd. Rasidin, Chairman of the Kerinci Regency Indonesian Ulema Council (MUI), stated: So that people perform prayers following Islamic guidance. The Qibla direction must be correct so that people are sure of their Qibla direction. First, the community does not call the Ministry of Religion for measurements. Second, society determines the Qibla direction using the way of their ancestors without using sophisticated tools or modern tools. Third, they determine the Qibla direction according to their wishes by looking at the sun only, not right at the sun above the Kaaba. Fourth, people think we have been using it like this all along, so why is it suddenly not right? Therefore it is crucial to re-measure the Qibla direction.(Rasidin, 2022)

Thus, in simple terms, the Qibla direction is interpreted as facing towards the Qibla with a distance that is closer to the position of the Kaaba in Makkah Al Mukarramah. So that every Muslim is obliged to face that direction when going to perform prayer services. That is, when a person is facing the Qibla correctly based on the science of calculations (astronomy Islam), the direction behind him is also the direction towards the Qibla (Kaaba). However, based on geographic data, the closest distance to the position of the Kaaba from both directions, the front direction, is called the Qibla direction because the most immediate direction is towards the Qibla, not the back direction.(Tanjung, 2018: 23)

The scholars agree that facing the Qibla when someone wants to perform the prayer service is obligatory. This is because facing the Qibla is one of the eight conditions for the validity of prayer.(Nurmila, 2017) For people in the city of Makkah and its surroundings, the problem of facing Qibla is not big. This is because determining the Qibla direction is easier because it is close to the centre, namely the Kaaba. Whereas for someone far from the Kaaba, this becomes a big problem due to the uncertainty of facing the Qibla correctly and even the scholars themselves have different opinions in determining the proper Qibla direction. Facing the Kaaba as the centre of Qibla is a condition for the validity of prayer, meaning facing the true Kaaba or the real Kaaba.(Ali et al., 2013: 17)

For example, when the Surinamese are about to pray, some are facing west obliquely to the north, and some are facing east obliquely to the north. This is because most of the Surinamese people come from Indonesia, and when praying, they think they have to be slightly to the west and obliquely to the north, as it is done when they want to pray in Indonesian



territory. Therefore, don't be surprised when people say that the Qibla direction for that east of Makkah City is facing west. On the other hand, for that west of Mecca, the Qibla faces east. Likewise, for those who are in the South of Makkah City, the Qibla direction is facing north, and for those who are in the north of Makkah City, their Qibla direction is facing south. This all happens due to the influence of the earth's round shape, so the determination of the Qibla direction uses a large circle with the planet's point as a reference. (Maulida & Thamrin K, 2016)

Pahrizal, Head of the Kerinci Regency Ministry of Religion, stated:

On average, the Head of the District Office of Religious Affairs is the executor. In mosques, the measurement of the Qibla direction is carried out based on the area. There All are the documents on the Community Guidance Website. For Kerinci Regency, there is not yet. It's different from the City of Sungaipuh. In the past, it was not easy to justify the direction, it was wrong (qibla direction) before in Sungai Full, but it was followed anyway because of an agreement. As for the mosque that ran first, the FS Mosque. And there are also other mosques. But in the district, there has not been until now. Maybe the follow-up is not so obvious, including the management of the Qibla direction. For example, if you want to build a mosque or mushalla, it is often the Head of the District Office of Religious Affairs who steps down. We only issue warrants. Then also, during the implementation of Eid prayers in the field. So a team was formed, including we were also part of the team and our plan was to centre the Qibla direction, so we went down. But until now, they are still being asked for the tools at the Kanwil, and so far, there has been no answer. So we have measurements of the Qibla direction according to the sun, and we will continue to carry it out. So the information from Kanwil has been disseminated. Then the Head of the District Office of Religious Affairs also spread to the community. (Pahrizal, 2022)

Thus, facing the Qibla itself has great urgency in carrying out the prayer rituals. Its position is a must after there is a stipulation or argument indicating that facing the Qibla is an obligation. At the beginning of the development of Islam, Rasulullah SAW. received an order to perform the five daily prayers. The first Qibla for Muslims at that time was the Baitul Maqdis (Aqsa Mosque) in Palestine. Rasulullah saw. performing prayers facing Baitul Maqdis lasted for eighteen months, with details of sixteen months while in Makkah and for two months in Medina after he and his companions carried out the migration. (Kementerian Agama Republik Indonesia, 2012, hal. 32) As for after the migration, Rasulullah Saw. feel homesick for his birthplace in the Grand Mosque in Makkah. So the Prophet often looked up to the sky to beg for the Qibla



direction to be returned to the Grand Mosque (Baitullah). Accompanied by the many ridicules of the polytheists about the religion of Muhammad SAW., which is the same as the Jewish religion facing Baitul Maqdis. So that when Rasulullah SAW. was in a mosque in the village of Bani Salamah, then Allah Saw. sent down the verse of Surah Al-Baqarah verse 144. The revelation of this verse has *menasakh* the previous verse, and the substance *di-nasakh* of the text, namely the Qibla of Muslims moved from Baitul Maqdis Palestine to Baitullah (Masjidil Haram in Mecca Al Mukarramah).(Musonnif & Aibak, 2018 : 40)

In the book *Minhaj Syarah Sahih Muslim*, Imam Nawawi emphasized that the prayers referred to in the hadith are obligatory prayers, not Sunnah prayers. In addition, the hadith orders to purify when you want to pray, face the Qibla while *takbiratul ikhram* and read *al-Fatihah* in every cycle of prayer.(Ash-Sabuni, 2001: 88) As for the *asbab al-wurud* hadith, at one time, a man came to the mosque and prayed, then the man faced Rasulullah Saw. and said *salam*. Rasulullah saw. refused the greeting of the man and ordered him to pray again. After the man prayed the second time, then the man returned to the Prophet. And say hello. Rasulullah saw. answered with *alaika al-salam* and ordered the man back to pray. It was stated that the man had not been said to perform the prayer before carrying it out three times. The man then asked Rasulullah Saw., what was the cause of his prayer being invalid? Rasulullah saw. also replied, if you want to pray, then complete ablution, then face the Qibla and say takbir. Related to facing the Qibla in this hadith is a meaning of how important it is to face the Qibla. So facing the Qibla when you want to pray, as explained earlier, is one of the eight conditions for the validity of prayer. The scholars agreed on this matter and became *ijma'* regarding the obligation to face the Qibla when they want to pray.(Al-Jaziri, n.d.: 196)

Information regarding the Qibla direction for Muslim communities is needed as a guide for performing prayers. In Indonesia, information about Qibla direction is available on the Mosque Information System (SIMAS) of the Ministry of Religion of the Republic of Indonesia.

Pahrizal, Head of the Kerinci Regency Ministry of Religion, said:

We use Simas in nature, under the Islamic Community Guidance of the Ministry of Religion. *Hisab ru'yah* is also under all Islamic Community Guidance. So concerning measuring the Qibla direction of Kerinci Regency, we are more guided by what the Kanwil issued. That's the Qibla direction, including the prayer/*imsakiyyah* schedule. Then we just made activities in the district, and we invited them like from IAIN there was Z, then from MUI. Then we show what was issued by Kanwil. Because of our limitations, the first is the equipment. So far, there is no such measurement. But some are contradictory, and it seems that the examples in the Kerinci Regency and Sungai Full City



areas are also frequent. Our friend N also often precedes. These are the pros and cons, what we issue is guided by Kanwil, he uses his own calculations. We take the coordinates from the grand mosque. For example, it's different, and we take it from the middle hill, and that is the challenge. For example, N has issued an *imsakiyyah* for Ramadhan 2023. Suppose we object, a team from the province cannot afford it. (Pahrizal, 2022)

Aspendri also confirms the above statement:

The Ministry of Religion can issue a circular letter long before the month of Ramadan. For example, in the month of Rajab it issued a circular letter to guide the *imsakiyyah* schedule issued. Many people are confused, especially in Kerinci the sirens here have sounded in other villages yet. Classical falaq experts admit that our Christian calendar is inseparable from Muhammadiyah, they are experts in reckoning. We cannot avoid the calendar we use for that person's thoughts on that person's calculations. (Aspendri, 2022)

Methods of Determining the Qibla Direction of Mosques in Bungo District

Ahmad Izuddin interprets the Qibla as the building of the Kaaba or a direction that Muslims aim to carry out most of their worship. So the Qibla direction itself is interpreted as the direction facing the Kaaba when going to pray. (Ali et al., 2013: 11) Harun Nasution interprets the Qibla as the direction to face when praying. (Tanjung, 2018) Meanwhile, Mochtar Effendy interprets the Qibla as the direction of prayer. (Effendy, 2001: 49) Meanwhile, the Ministry of Religion of the Republic of Indonesia interprets the Qibla as a particular direction for Muslims to turn their faces when praying.

The full meaning of the Qibla direction is explained by Slamet Hambali, who interprets it as the direction towards the Kaaba via the closest route and requires Muslims to face it when going to pray, wherever they are in this hemisphere. (Hambali, 2011: 167) So some interpret the Qibla direction as the closest direction to the Kaaba through the great circle of the globe. The large circle of the globe that is passed by the Qibla direction can be referred to as the Qibla circle. The Qibla circle itself is interpreted as a circle of the globe that passes through the Qibla axis. (Hambali, 2013: 14)

Harlek Says:

In Bungo, the mosque that stands out is the Muhammadiyah mosque, while NU is neutral. Because the Muhammadiyah people pray and there is only one Muhammadiyah mosque, as far as I know, the Muhammadiyah mosque has not changed since the past,





at least it was renovated on the outside of the Qibla direction is like that. Because the movement of the Qibla direction changes, there are several cases in that Sanusi said that along with changing the Qibla, people renovate the Qibla. A *mushalla* wants to be converted into a mosque (not yet renovated). The shifting of the prayer mats, firstly at the Nurul Yaqin Mosque, was due to a change in the Qibla direction and the public's desire to re-measure the Qibla direction and use that measurement. They followed it then, and some did not accept it. After that, a member of the Ministry of Religion came there to re-measure. Both Nurul Ikhsan Mosque (Muaro Bungo market). (Harlek, 2022)

Some people widely use Qibla direction determination using a compass. Moreover, many compasses sold in the market with various types can make it easier for people to find them. Because one of the problem factors in determining the Qibla direction in Indonesia, besides the existence of differences in understanding among the people, is also related to the lack of knowledge and also the absence of modern equipment to measure the Qibla direction. (Ngou & Tilome, 2018, hal. 64) That's why the existence of a compass that is easy to find can make it easier for people to measure the Qibla direction. As previously explained, the compass itself is a navigation tool in the form of a magnetic pointer arrow that can adjust itself to the earth's magnetic field, which has the function of indicating the direction of the cardinal points. (Ngou & Tilome, 2018) The direction shown by the compass is magnetic north. The north position on the compass, which is magnetic north is not necessarily the same as true north. This difference in function to the north is called the magnetic oblique angle or also known as the declination. This declination position will have differences from one place to another and constantly changes throughout the year.

The existence of differences in understanding among the community and the lack of knowledge the community possesses makes it prone to conflicts that occur, especially those with religious nuances. The competition can be motivated by being too fanatical about the results of previous Qibla measurements measured by the ancestors. However, not all people experience this.

Sanusi, Chairman of the Bungo district MUI, stated:

As far as I know, there has never been a conflict in Bungo. They assume that the Qibla direction used for prayer is correct. In perfection and society, they are more comfortable, rather than the inaccurate conditions that have so far made them wary. Even though the prayer rug has shifted slightly, the community is more comfortable. They are more





comfortable praying when the MUI or the government has verified the Qibla direction. So don't cause concern. People are more obedient to MUI.(Sanusi, 2022)

While Harlek stated:

The historic, undocumented mosque in Amplu. Historically word of mouth, Qibla's direction still refers to the old direction. From the initial establishment of the mosque until now, the Qibla direction still refers to the old direction. After measuring the Qibla direction, it turned out that a conflict arose, and the community did not agree to be measured. It turned out that after that came the initiative from the community to ask for a re-measurement. After being measured for the second time, it turned out that the results were the same as the first measurement, and finally, people use these measurements to this day. The chairman of the MUI once said, "If you are not sure about the size of the Ministry of Religion, who else will you be sure of". As happened at the Baiturahman Mosque (direction to Padang).(Harlek, 2022)

Harlek further states:

In the Tanah Sepengkal District area, there has been a conflict in the community. After the battle, they asked to re-measure, and previously they had also measured manually with their knowledge, but it turned out that they had gone too far after being measured, finally, the conflict that occurred was resolved. There are three methods used, the first is a digital compass on the cellphone, the second is a manual compass, and the third is the sun's shadow. I trust the manual compass more. In addition, we were given a theodolite, the theodolite, if the far position is used because the reference is the sun, if it is cloudy, it can not.(Harlek, 2022)

There are errors in using a compass in determining the Qibla direction, including: First, the earth's gravitational pull on a compass somewhere is always affected by the metal materials around it. In addition, electric current can affect gravity on the compass, which makes the results less than optimal. Second, a compass with a low price, usually the results are less precise and less than optimal. Many compasses have a sharp accuracy but are expensive, namely the Suunto type compass, Forestry Compass DQL-1, Brunton, Marine, Silva, Leica, Furuno and Magellan. Even though it has the advantage of having a high degree of accuracy, this type of compass still has weaknesses when brought into a room that contains much metal.





Along with its development, there is a digital compass (satellite) due to the growth of the weaknesses of the magnetic compass. This digital compass has been developed with the guidance of satellites in the sky. The integrated system is the global positioning system (GPS). GPS itself is a software application that is owned and developed by one of the well-known cellphone brands. Everyone who has an Android phone can install the GPS application so that the phone does not only have the function of communication media, business media, educational media, and entertainment media but can be used as a compass that can directly guide the position of the Qibla direction wherever a person is. The development of determining Qibla direction with GPS has also been developed in many watches. Many watch brands are equipped with a digital compass that makes it easier for users to determine the Qibla direction when in a place where there are no Qibla directions, such as in a forest, etc.

With a digital compass that is easy to access and use, it is possible that the people of Jambi also use many compasses to determine Qibla's direction. That's because almost everyone, at various ages, must have a smartphone with all the applications that can make it easier. The obstacle is the lack of knowledge and the willingness of the public to become more familiar with and utilize smartphone facilities in determining the Qibla direction in an easy, fast and accurate way. The other causal factors are related to the problem of determining the Qibla direction, and the community has surrendered a lot to religious leaders or influential figures in the area where they live, and the community can only follow directions and trust the results that have been determined. So that such an attitude becomes an obstacle to taking advantage of its capabilities and facilities related to the ease of accessing the Qibla direction determination application. Thus, of course, the comfort of progress in the development of technology and information should be maximized to make it easier to solve life problems in society, including in determining the Qibla direction, which is something important in achieving the comfort of worship.

Methods of Determining Qibla Direction of Mosques in East Tanjung Jabung Regency

In Indonesia, the determination of Qibla direction by Muslims has experienced significant developments. This is in line with the development of existing science and technology. In determining the Qibla direction, Indonesian Muslims first determine it to the west by positioning the Kaaba, which is in Saudi Arabia, to the west of Indonesia's position. The determination is made with estimates without prior calculations and measurements. Therefore, the position of the Qibla direction for the Indonesian region is the same as the position of the setting sun, so the position of the Qibla direction for the Indonesian area is identical to the west. (Maskufa, 2009: 132)





In its development, based on the geographical location of Saudi Arabia, which is correct to the west with the provision that it is slightly tilted to the north (northwest), the Indonesian people, as previously described above, always weave their Qibla to the north or northwest. So that there is always some Muslims in Indonesia who, when they want to pray at the mosque, tend to tilt it slightly to the north even though the position of the Qibla direction has been measured and determined. (Marpaung, 2015: 61)

In Jambi, the field of methods for determining Qibla direction was taken over by the Indonesian Ministry of Religion's Community Guidance (Bimas). This authority is passed on to all regional-level stakeholders, such as in East Tanjung Jabung Regency.

Misbah says:

Institutionally, it is not with us, but I'm in the Bimas section. I happen to be in charge of madrasah education. But if only to provide information. If it is fundamental in the field, the Qibla direction changes significantly. It's changed too much. As for measuring data, I am not in charge of the Qibla direction. So on a task basis, Aspendri can answer. If the people there, I am the people there. I see the *mushalla*, if the *mushalla* is no problem. The Qibla direction is just right. Suppose it was founded recently, too, around 2014. This was measured by the Ministry of Religion as well. I've never heard of any conflict, but the excitement is that the Qibla direction here has dramatically changed. (Misbah, 2022)

As for now, with the development of astronomy, Indonesian Muslims can determine the Qibla direction based on the shadow of an object in the form of a pole or stick. The tool used in determining the Qibla direction is in the form of a *miqyas* or *istiwa* post' and also a *rubu mujayyab* or known as a protractor. Muslims are guided by the sun's exact position at the zenital point of the Kaaba in Saudi Arabia. The results of this calculation are considered accurate. How determine the Qibla direction with this method is called *rashdu al-qiblah*. At the same time, groups of Muslims who use this method in determining the direction of Qibla are called *ru'yah* schools. (Izzuddin, 2003: 36)

Along with the times, with the discovery of a compass direction tool. Muslims began to use a compass to determine the Qibla direction. The compass is very easy to use, despite its many weaknesses that will affect the results. Furthermore, in determining the Qibla direction, a calculation method is used by utilizing the science of measurement, which combines the coordinates of the Kaaba with the coordinates of a particular area. This method is carried out in two ways, namely, the science of measuring planes and the science of measuring the circle of the earth or what is known as spherical trigonometry. The results of using this method are pretty



accurate. Even though there are many, sophisticated tools, data collection on all mosques in an area is not well recorded.

Aspendri says:

Yes, there is no historical data for the mosque. We have never collected data, and we are the final data collection. The last direct identification was in 2011. If needed later, I can help with the many extension officers here. Just leave instruments or questions, and I will give them to village extension workers. For example, what are the mosques, and who are their founders? Later give the instrument to me first, and I will send it back in three days. I have 300 extension workers. Meanwhile, those who measure the Qibla are also direct instructors, so if there is a request for Qibla measurement, the instructor will direct it.(Aspendri, 2022)

Furthermore, the method of determining the Qibla direction underwent a significant change. As a result, many scholars provide formulas about ways or methods of determining the Qibla direction. Tgk. Moch Ali Muda, whose method was perfected by Chairul Zen S. stated that in determining the Qibla direction, there are several ways, namely:

First, by using the north point azimuth formula. Azimuth itself is an arc on a horizontal circle with measurements starting from the north point to the east or from the south point to the west.(Salam, n.d.: 103) Azimuth for the east is 90 degrees, azimuth for the south is 180 degrees, azimuth for the west is 270 degrees, and azimuth for the north is 0 degrees or 360 degrees. If an azimuth is measured from north to west or, in other words, counterclockwise, then the result is usually negative and marked (-). Therefore, if an azimuth point to the west is 270 degrees, its position is the same as an azimuth -90 degrees, or in Arabic, it is termed the word *al-samt*.(Supriatna, 2007: 11)

As for what is meant by the azimuth of the north point, it is interpreted as an angle formed by the condition of an area whose Qibla direction is being determined with the north point and the position of the Kaaba.(Khazin, 2004: 48) Therefore, the stipulation that becomes the exact tilt of the Qibla direction is the direction indicated by an angle formed from the area by looking at the north point and the position of the Kaaba point.

Second, by using the Qibla shadow (the shadow of the sun). The Qibla shadow itself is interpreted as the shadow of an object that stands perpendicular to the earth's surface. The shadow is determined on certain days, which will point towards the position of the Kaaba in the City of Makkah, Saudi Arabia.(Harun, 2009: 71) The way to determine the Qibla direction using



this method is to position an object in an open field, then pay attention to the shadow produced by that object when the sun's position is not covered by clouds and adjust the time used with standard times such as hours, minutes and seconds—adapted to the time standard of a region and the Unitary Time Correction (KWK) of an area.

As explained above, the position of the earth is spherical, so even the area where the line is drawn to the Qibla direction and the bar is extended forever will form a perfect circle, whether the line is in the form of a significant process which can divide the globe into equal or circular shapes. A small object that divides the globe into two unequal parts. The position of the sun, which moves in units of days (apparent motion) from east to west, sometimes the position of the sun intersects the circle of the Qibla line. So that when the sun is in that position, the shadow of an object that is produced will have a direction towards the Qibla position. This makes it easier to determine the Qibla direction in terms of building places of worship such as mosques, prayer rooms and prayer halls or in determining the Qibla direction when performing prayers in the field such as the Eid prayer or the prayer for rain or the *istishqa'* prayer. (Harun, 2009)

The guidelines for measuring and calculating the Qibla direction in an open field contain notes that need attention, among others (Marpaung, 2015: 1). For areas to the east of the Kaaba position. If the position of the shadow occurs before the sun's culmination, the Qibla direction in this area will be indicated by the shadow facing away from the object. Meanwhile, if the shadow occurs after the sun's position has culminated, then the Qibla direction of this area will be indicated by the shadow towards the object. 2). For areas suitable to the west of the Kaaba position. If the shadow occurs before the sun's position culminates, the Qibla direction from this area will be indicated by the shadow towards the object. Meanwhile, if a shadow occurs in an area after the sun's position culminates, then the Qibla direction from this area will be indicated by the shadow facing away from the object.

Third, with the method of *rashdu al-Qibla* or *istiwa' a'zham*. This method is interpreted as determining the Qibla direction based on the position of the sun that is the same or close to the position of the zenital point of the Kaaba. This method is straightforward, and the results obtained from this method are more accurate than the previous method. (Maskufa, 2009) As for the position of the sun, which is precisely at the zenital point of the Kaaba, when the sun's declination is the same as the latitude of the Kaaba, then that position will culminate directly above the Kaaba. This position does not occur every day, but in one year, there are two days where the sun is above the zenital point of the Kaaba, namely every May 27 (leap year) or May 28 (*basithah* year). This event always occurs at 11.57 LMT (Makkah time) and on July 15 (leap





year) or July 16 (*basithah* year) and appears at 12.06 LMT (Makkah time). (Andi Jusran Kasim et al., 2021)

Meanwhile, if it is converted to West Indonesia Time (WIB), which is at position $105^{\circ}-39^{\circ}50' = 15^{\circ}4'20'' = 40^{\circ}$ or $4^{\circ}21''$, the event will occur at 16.18 WIB (11.57 LMT + 4.21) and 16.27 WIB. Every Indonesian Muslim who will measure the Qibla direction with this method is May 27 or 28 at 16.18 WIB or every July 15 or 16 at 16.27 WIB. On both dates and times, the position of all the shadows of an object illuminated by the sun will be in the same direction as the Qibla direction. This method of determining the Qibla direction is also known as the *istiwa a'zham* method. (Marpaung, 2015) This is due to the apparent movement of the sun. Many Muslims in various countries, including Indonesian Muslims, have practised this method. Apart from this method, it is accessible without going through complicated and somewhat tricky formula calculation methods. With this method, the only tool needed is a stick measuring one meter long and placed in an open field or on flat ground and gets sunlight. Meanwhile, if the results of observations on that day fail to be carried out cause of the weather that day being cloudy, then tolerance is still given to observe it again the next day or two days later.

As has been explained, that one of the conditions for using this method is to do it in an area or place that must be exposed to direct sunlight. So for areas of Indonesia where this event occurs in the afternoon, the calculation and application of this method cannot be carried out in the eastern part of Indonesia. Because at that time, the position of the sun in that area was already showing at 18.18 or 18.27 WIT and the position of the sun was already below the horizon, or the sun was already setting. The conditions for using this method include (Marpaung, 2015):

- 1) Determine the location of the place of worship or house where the Qibla direction will be straightened;
- 2) Provide a straight long stick or object with a size of one to two meters and tools to facilitate installation. It is more perfectly accompanied by a thread under which it is subjected to a weight or bobble with the aim that the stick can be perpendicular. Apart from that, prepare an hour that is equated with the correct time and even connected to radio, television or the internet;
- 3) Find a flat location around the place where the Qibla direction will be determined, and it is still lit by the sun at that time. Preparation in determining the Qibla direction with this method should not be too close to the time of the main events so that you are not in a hurry and the results are maximized;
- 4) After installing the tools needed correctly, then wait until the main event occurs. Observe the sun's shadow made by a stick or other straight object and mark it with a marker or duct tape, making the straight mark according to the resulting shadow;
- 5) In Indonesia itself, the main *istiwa'* event occurs in the afternoon so





that the shadow that is produced is directed towards the east. The direction of the object's shadow towards the west is slightly oblique to the north, which is the correct Qibla direction; 6) Use a rope or other device that can align the shadow with the Qibla direction at a place of worship or a house where the Qibla direction is being checked; 7) The use of this method does not have to be done on that day, it can go backwards or forwards one to two days at the same time or in the range of +/- five minutes on that day. This is due to the relatively slight shift of the sun, which is about 1/6 degree each day or about three minutes each day. Therefore, before D-day, it must be reduced (-), and after D-day, it must be added (+) three minutes every day. Thus, this method can be done daily without waiting for a special event.

Aspendri says:

In a village or village, it is clear that a person is not a fanatic about his studies or knowledge but is fanatical about the people (religious leaders). And there are many calibration conflicts and problems of their ancestors who built the mosque, who donated their land, and all that. So they don't want to change. Because how it used to be, that's how it is now. The Ministry of Religion program is used to calibrate all mosques here. At that time, there was a lot of community rejection. So it was at that time that many said that our Qibla had changed a lot. It is not the qibla that changes, but the mosque that is never measured. And measuring the qibla is a government program, not because the qibla has changed. Where can the Qibla direction change? Has anyone ever run away from him? But people's knowledge at that time, we face the Qibla to the west, to the true west or northwest. They point toward the true west, that is, to 270 degrees. Even though the stipulation is that our Qibla in Tanjabtim is at 294 degrees, even the MUI's rule is detrimental to the Qibla direction, which is less than 2 or 3 degrees. Humans point to the Qibla. The Qibla direction in the Grand Mosque leads to the Kaaba, while we suggest the Grand Mosque. Then we are included out of the forbidden land. The illegal land is only 16 KM x 24 KM.(Aspendri, 2022)

The methods above are the same, namely the method that is both carried out to find the point of the accuracy of the Qibla position for the desired area and the area is located far from the scope of Saudi Arabia where the Kaaba is located.(Zen S., 2005: 9) However, not all places or areas have to determine their Qibla direction by calculating astronomy. This is because several sites do not require astronomical calculations to determine the Qibla direction, including:

First, the area whose geographical longitude lies at 39° 50' East Longitude (BT). The stipulation is that if this area has a North Latitude (LU) more remarkable than the Latitude of





the Kaaba, which is located at $21^{\circ} 25' N$, then the position of the Qibla direction for that area is precisely at the point towards the south. Meanwhile, if an area whose North Latitude (North Latitude) or South Latitude (LS) is less than the Latitude of the Kaaba ($21^{\circ} 25'$ North Latitude), then the Qibla direction is precisely at the north point. The cause of the determination of the Qibla direction in this area is that the position of the Kaaba is located at a geographical latitude of $21^{\circ} 25'$ North Latitude and a geographic longitude of $39^{\circ} 50'$ East Longitude (BT).

Second, the geographical latitude is $21^{\circ} 25'$ North Latitude. The stipulation is that if these areas are to the east of the Kaaba, then the Qibla direction for this area is exactly at its western point. Conversely, if a room is to the west of the Kaaba, then the Qibla direction for that area is to the east.

Third, the area whose geographical longitude lies at $39^{\circ} 50'$ East Longitude (BT). The stipulation is that if there is an area whose latitude and longitude are less than $21^{\circ} 25'$ latitude, then the Qibla direction for that area is exactly at its north point. Meanwhile, if an area's LS is more incredible than $21^{\circ} 25'$ LS, then the Qibla direction for that area is exactly at its south point. Meanwhile, if the site is $21^{\circ} 25'$ south latitude, then the Qibla direction for that area is in all directions. This is because the position of the Kaaba is precisely where the nadir or lowest point is.

Based on that, the development of technology and information with various sophisticated tools can be used to determine the Qibla direction. Jambi, as a province that is far from the position of the Kaaba, must carry out *ijtihad* for the Qibla direction, which can be determined through the science of astronomical calculations and astronomy with the help of various sophisticated tools such as compasses, GPS, theodolite, etc. Moreover, these sophisticated tools are used nationally and regionally by other countries. These modern tools will make the Qibla direction more precise and accurate. Thus, with sophisticated devices capable of accurately determining the Qibla direction, the legal provisions of *Qibla zan* and *Qibla ijtihaad* will be able to approach the *kitabul yaqin*. So that Indonesian Muslims can pray peacefully without any doubts about what happened in Kerinci Regency, Bungo Regency and East Tanjung Jabung Regency.

CONCLUSION

There are several methods for determining the Qibla direction for mosques in Jambi Province. And is one of the eight conditions for the validity of prayer. The scholars differed regarding the determination of the Qibla direction for people who are far from the Kaaba or are outside the City of Mecca. Several opinions of scholars regarding this matter can be grouped





into two, namely first argues that for people who are far away or are outside the city of Mecca, it is enough for them just to face it (*Jihatul Kaaba*). The law by simply facing towards it (the direction of the Kaaba). Second, it is argued that facing the Qibla is obligatory facing directly to the building of the Kaaba (*'Ainul Kaaba*), even for people who are far from the Kaaba, so they must make *ijtihad* to know the Kaaba directly. Therefore, it is as if he is facing the *'Ainul Kaaba*, even though, in essence, he is facing the *Jihatul Kaaba*. Qibla's direction is closely related to the primacy of prayer for Muslims worldwide. Qibla direction is one of the conditions that must be met to carry out worship following the provisions of religious law as the basic guidelines for facing the Qibla in the Al-Qur'an and Hadith. This shows how vital Qibla's direction is for Muslims. One of the pearls of wisdom of moving the Qibla direction is as a form of unity for Muslims and because the Kaaba is indeed a privileged place by Allah Swt.

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