PROBLEM AND SOLUTIONS FOR ACCEPTING A SINGLE GLOBAL ISLAMIC CALENDAR

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ABSTRACT

The Global Islamic Calendar functions to realize the unity of the Ummah with a globally unique calendar and minimize differences between countries in the implementation of worship based on determining the beginning of the Hijriyah month. The fact is that Islamic civilization is almost 1.5 millennia old and to this day does not yet have an accurate, unifying calendar system. In realizing a Single Global Islamic Calendar, Saudi Arabia has a dominant factor because it is the center of Islamic Worship including the place where Wukuf is carried out on Arafah. Therefore, this research will describe problem and solutions for accepting a single global islamic calendar. This research method uses qualitative and quantitative methods with a systems thinking approach. The results of this research provide an approach, argumentation, and solution with a new criterion, namely Neo KHGT Turkey 2016 so that the acceptance of a single global Hijriyah calendar for Saudi Arabia and the world can be realized.

**Keywords**: *Hijriyah Calendar, Neo KHGT Türkiye 2016*

INTRODUCTION

The purpose of the Global Islamic Calendar is to realise the unity of the Ummah with a globally unified calendar and to minimise the differences between countries in the performance of worship based on the determination of the beginning of the lunar month. Many Muslim astronomers have developed their own criteria (Ahmad, 2020; Odeh, 2004) in the Islamic civilisation itself observational activities in an observatory began from the 8 th century to the 14 th century (Qorib, 2019) . The reality is that Islamic civilisation is almost 1.5 millennia old and still does not have an accurate unified calendar system. The Global Islamic Calendar is an urgent need for Muslims today (Rakhmadi & Hidayat, 2020). In the

second expert meeting in 2008, 6 requirements for an Islamic calendar were defined. The same is also contained in the book entitled At-Taqwim al-Qamari al-Islami al-Muwahhad (Ar-Raziq, 2004). The Second Assembly of Experts decided that it was impossible to unify the Islamic calendar globally without adhering to the Hisab and set four drafts of the global Islamic calendar to be tested over the next century(Anwar. S, 2014). Many Muslims doubt the realisation of the Unified Global Islamic Calendar (KHGT) both at home and abroad (Özlem, 2014) In the realisation of this Unified Global Islamic Calendar, the author believes that Saudi Arabia has a dominant factor because it is the centre of Muslim worship, including the place of Wukuf in Arafat. We know that the 2016 Turkish KHGT criteria will cause the eastern part of the world to enter the new moon even though the hilal is still below the horizon, as shown in Figure 1 below:

Figure 1 : Hilal visibility map of Jumadil Akhir 1446 H
Source : astronomycenter.net (*https://www.astronomycenter.net/record.html*, n.d.)
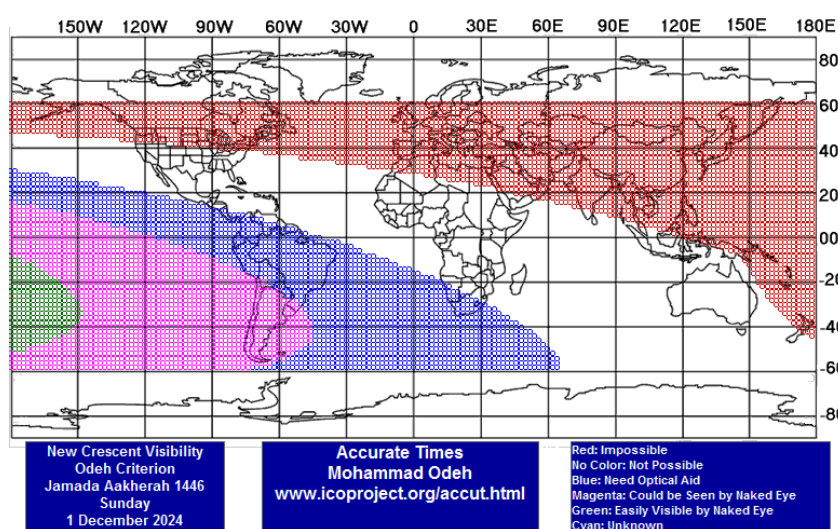
This view can be countered, among other things, with the argument that Imkan Rukyat moved from the western region to the east (Hidayat, 2023). However, in the case of Jumada al-Thani 1446 H in Figure 1 above, when the KHGT criteria are met, Hilal in Saudi Arabia is still in a minus position, which minimises the possibility of Saudi Arabia accepting the Turkish KHGT criteria of 2016. The author examines from 1444 to 1470 (30 months), there are 10 months when the KHGT criteria are met, Hilal in Saudi Arabia is still in a minus position, specifically in Jumada al-Thani 1444 H, Rajab 1445 H, Jumada al-Thani 1446 H, Jumada al-Thani 1447 H, Jumada al-Thani 1448 H, Jumada al-Awwal 1453 H, Jumada al-Awwal 1454 H, Jumada al-Awwal 1457 H, Dhu al-Hijja 1467, Safar 1467.

The criteria that make Hilal already exist in Makkah City will increase the chances of KHGT acceptance by the State of Saudi Arabia. The research aims to elaborate that the 2016 Turkish KHGT criteria can consider one more condition in its criteria, which is that the Hilal has already appeared in Makkah. Therefore, in this study, the researcher recommends a perfecting criterion of the 2016 Turkish KHGT Criteria. The criteria recommended in this paper are the same as the 2016 Turkish KHGT Criteria, but there is the addition of the Wujudul Hilal Criteria in Makkah or can be called the 2016 Turkish KHGT Neo Criteria. The 2016 Turkish KHGT Neo Criteria are as follows:

"The beginning of the month begins when, at the time of Maghrib, in any place, the lunar elongation (moon-sun distance) is more than 8 degrees, the lunar height is more than 5 degrees, and the Hilal has appeared in the city of Makkah".[1]

RESEARCH METHOD

This research method used qualitative and quantitative methods with a system thinker approach. A system thinker sees a problem on at least three levels: 1. Reactive 2. Adaptive 3. Generative. The deeper the problem, the more difficult the analysis because the concepts used are more abstract. However, in most cases, if done well, the solutions available will be better (Suaedi, 2016). These levels are illustrated in Figure 2. in the form of an "iceberg":

Figure 2 : System Thinker
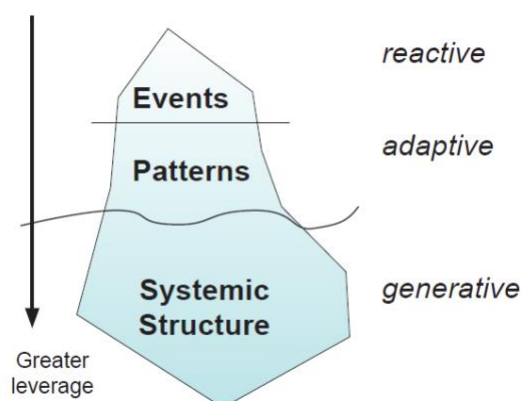
RESULTS AND DISCUSSION

The approach used in this research is a systems thinker approach. For the KHGT case, the approach taken consists of three approaches, as follows

Generative approach

The generative approach in the KHGT case is to find a comprehensive solution so that KHGT can be accepted and applied throughout the world so as not to cause other problems.

To further explain the Generative Approach, Figure 3. below shows the scheme of the Generative Approach in the case of KHGT implementation.

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[1] If these criteria are met after 00:00, then IR has occurred anywhere in the world / on the American continent and the Ijtimak in New Zealand occurs before dawn.

Figure 3 : Scheme of the generative approach in the case of KHGT implementation
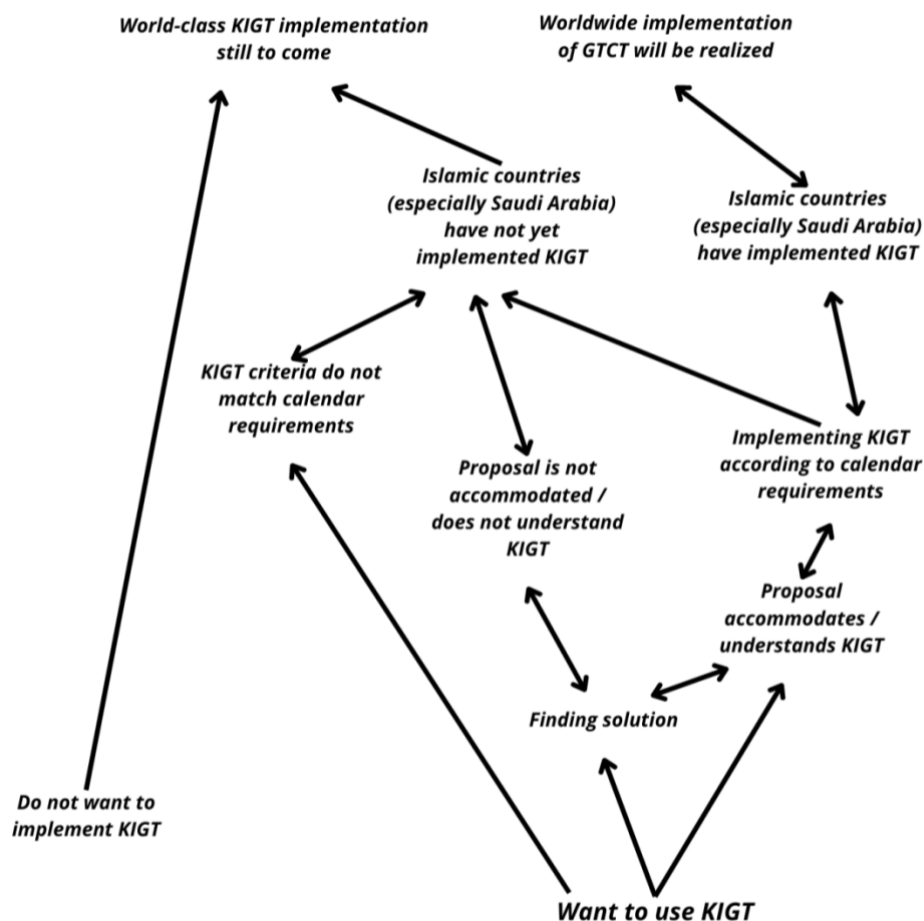

Figure 3 shows the scheme of the Generative Approach Scheme in the case of the application of KHGT at the global level with all the problems that occur, so that it can better explore the causes and solutions of each problem that occurs, in this case the application of KHGT.

From the above scheme, there must be a solution in the application of KHGT. One of the solutions offered is the 2016 Turkish Neo KHGT Criteria so that KIG can be realised at world level.

Here are some arguments for the 2016 Turkish Neo KHGT Criteria.

The Needs of Support from Saudi Arabia

We all know that the country of Saudi Arabia uses the Ummul Quro calendar. The Ummul Quro Calendar is the official calendar of the Government of the Kingdom of Saudi Arabia, prepared and compiled by the King 'Abdul Aziz Centre for Science and Technology (KACST). This calendar is used for civil and administrative purposes only and is not used to

determine the dates of Ramadan, Eid al-Fitr and Eid al-Adha. These three religious moments are determined by the Majlis la-Qada al-A'la according to the principle of rukyat.(Anwar. S, 2014).

The 2016 Turkish Neo-KHGT criteria and the Ummul Quro calendar have in common that they require the hilal to be above the horizon after Ijtimak, when the sun sets in Makkah.

Sultan 'Abdul 'Aziz al-Marmasy, in a conversation with Syamsul Anwar in 2016, expressed his hope that the Ummul Quro calendar, which has the principle that the Hilal is already above the horizon after Ijtimak when the sun sets in Makkah, could be used as an international Hijriyah calendar. In one of his papers on the Internet, Sultan said, "We hope that Ummul Quro Calender (with the principle that the Hilal has already appeared in Makkah) can be widely accepted by Arab and Islamic countries." (Anwar. S, 2014) This is in line with the 2016 Turkish Neo KHGT criteria, which in addition to requiring that the lunar elongation of 8 degrees and the Hilal height of degrees be met anywhere at Maghrib, also requires that the Hilal has already appeared in the city of Makkah.

The principle that the Hilal is already above the horizon when the sun sets after Ijtimak is universal, and the principles are the same as those of the Qatari and Kuwaiti calendars. It is also used by many parties outside Saudi Arabia and is the default Hijri calendar in the Arabic setting of Microsoft Vista.

a. Countries who follow Saudi Arabia

Many other countries in the world follow Saudi Arabia in determining the beginning of the lunar month, as shown in Table 1 below.

Table 1 : Countries that follow Saudi Arabia in determining the beginning of the lunar month

1. Saudi Arabia	2. Afghanistan	3. Albania	4. Algeria
5. Armenia	6. Austria	7. Azerbaijan	8. Bahrian
9. Belgium	10. Bolivia	11. Bulgaria	12. Burkina Faso
13. Chechnia	14. Denmark	15. Finland	16. Georgia
17. Hungary	18. Iceland	19. Iraq (Sunnis)	20. Italy
21. Japan	22. Kazakhstan	23. Kuwait	24. Kyrgizstan
25. Lebanon	26. Mauritania	27. Palestine	28. Philippines
29. Qatar	30. Romania	31. Russia	32. Singapore
33. Sudan	34. Sweden	35. Switzerland	36. Syria
37. Taiwan	38. Tajikistan	39. Tatarstan	40. Togo
41. Turkmenistan	42. U.A.E.	43. Uzbekistan	

Sources : https://www.moonsighting.com/(*https://www.moonsighting.com/*, n.d.)

From Table 1, it can be seen that if the State of Saudi Arabia implements KHGT, the number of countries that will implement KHGT will increase, which of course will be able to influence other countries that have not implemented KHGT.

Neo KHGT Turkey 2016 criteria according to calendar requirements

Abdul Raziq and Syamsul Anwar's statement KUQ or calendar with the principle of Hilal has been realised in Makkah City cannot be KHGT Criteria because it contradicts the 4th, 5th and 6th requirements according to the Second Expert Meeting in 2008 which states that there are 6 requirements, but in its development there are new formulations so that it is possible to apply the calendar with the principle of Wujudul Hilal in Makkah City. The following is an argument for applying the 2016 Turkish Neo KHGT Criteria in accordance with the calendar requirements.

a. Neo KHGT Turkey 2016 criteria according to the fourth condition

The fourth condition is that the Islamic calendar should not cause a group of Muslims anywhere in the world to enter the new month before the birth of Hilal (before conjunction). According to Jamaluddin Abd Raziq, if the Ummul Quro Calender or the calendar with the principle of Hilal has been realised in the city of Makkah, it cannot be a KHGT criterion because it will result in entering the new month before the ijtimak (for the eastern region).

The solution to the principle of this problem has been found, as contained in the 2016 Turkish KHGT criteria, by providing a note to the criteria, that is, if the criteria are met after 00:00, then IR has occurred anywhere in the world / on the American continent, and Ijtimak in New Zealand occurs before dawn. If this note or rule is also used on the calendar with the principle of Hilal already realised in the city of Makkah or the 2016 Turkish KHGT Neo Criteria then there will be no cases that conflict with the calendar requirements.

b. Criteria for Neo KHGT Turkey 2016 according to the fifth condition

The Islamic calendar should not cause a group of Muslims somewhere in the world to start a new month before they are sure that imkanur rukyat hilal has occurred somewhere in the world. According to Jamaluddin Abd Raziq, if the Ummul Quro Calender or calendar with the principle of Hilal has been realised in the city of Makkah, it cannot be a KHGT criterion because it will result in a group of Muslims somewhere on earth starting a new month before the occurrence of *imkanur rukyat* hilal somewhere on earth.

It should be noted that if the 2016 Turkish Neo KHGT Criteria are applied, the 2016 Turkish Neo KHGT Criteria Implementation is a cumulative criterion, which means that a combination of the two criteria must be met simultaneously. This means that in addition to fulfilling the Wujudul Hilal criterion in Makkah City, the IR criterion with the moon elongation (moon-sun distance) of more than 8 degrees, the moon height of more than 5 degrees is also fulfilled, as contained in the 2016 Turkish Neo KHGT criteria, which reads :

> *"The beginning of the month begins when, at the time of Maghrib, the moon elongation (moon-sun distance) is more than 8 degrees, the moon height is more than 5 degrees, and the Hilal has manifested in the city of Makkah."*

c. Criteria for Neo KHGT Turkey 2016 according to the sixth condition

The sixth requirement is that the Islamic calendar must not cause a group of Muslims in any place on earth not to have entered the new month while the hilal of the month has been clearly displayed on their horizon. According to Syamsul Anwar, the Ummul Quro Calender

criteria or the calendar with the principle of hilal has been realised in the city of Makkah cannot be KHGT criteria because it will cause the calendar system not to have entered the new month even though the hilal has been clearly displayed in the western region in 16 cases (contrary to the sixth requirement).

It should be noted that in the 2016 Turkish KHGT criteria, the IR standard used is the elongation of the moon (moon-sun distance) of more than 8 degrees, the height of the moon is more than 5 degrees, in the author's opinion with the fulfilment of these IR criteria it cannot be said that the hilal is clearly visible or the hilal is clearly displayed on the horizon as mentioned in the sixth requirement. On closer inspection, the 8 degree elongation and 5 degree lunar elevation in Syed Khaulid Shaukad's criteria fall into the category of being visible with the aid of optics rather than the naked eye. As shown in Figure 5 below:

Figure 4. Hilal Visibility Map of Jumada al-Thani 1446 H
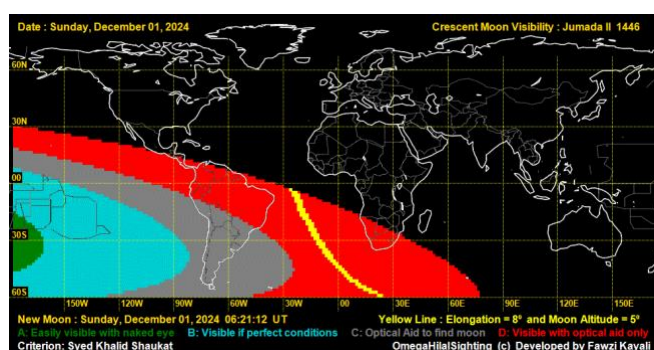
Figure 4 shows that although the 8 degree elongation and 5 degree altitude are met (the boundary line is shown as a yellow line), the red and grey curves according to Syed Khaulid Shaukad's criteria cannot be seen with the naked eye, or the hilal is not clearly displayed as mentioned in the sixth requirement.

Khalid Shaukat's criteria are formulated on the basis of 900 observations collected over a period of 150 years in various locations around the world. This criterion uses the variables of the lunar altitude and the width of the lunar crescent at sunset. The lunar altitude at sunset must be > 3.4 degrees and (alt/12.7) + (crescent width 1.2 arcs per minute)>1(Xin, 2012).

According to world record data, the crescent moon was visible to the unaided eye at a 7.7-degree elongation in the month of Sha'ban in the year 1410 Hijri. As shown in Figure 4, the visibility map for Sha'ban 1410 H shows that in this instance, the start of the new month coincides with the Neo KHGT Turkey 2016. Hereunder:

Figure 5 : Visibility Map of the Crescent Moon for Sha'ban 1410 AH

Figure 5 above shows the data on the visibility of the crescent moon using the naked eye in accordance with the Neo KHGT Turkey 2016 for the beginning of a new month. There has never been data on the visibility of the crescent moon that contradicts the principles of Neo KHGT Turkey 2016, or in other words, there has never been data on the visibility of the crescent moon while in Saudi Arabi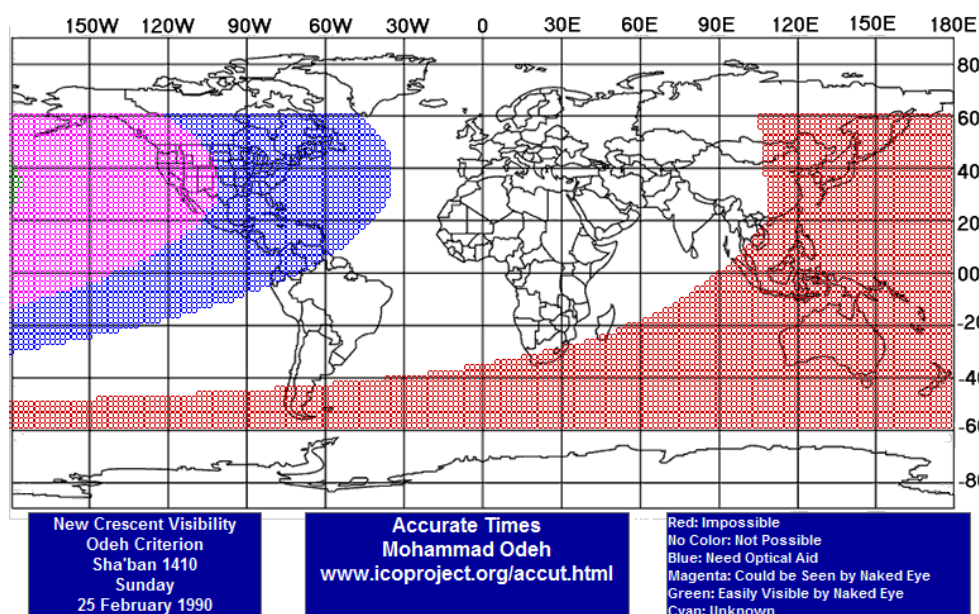a the crescent is still below the horizon. From the explanation provided, the author believes that the Neo KHGT Turkey 2016 criteria meet the requirements of the Calendar established in the Expert Meeting II in 2008.

In accordance with the lunar synodic cycle.

If examined further, the criteria of the Neo KHGT Turkey 2016 will correspond with the monthly synodal cycle data shown in Table 1 below.

Table 2 : Comparison and Suitability of the Number of Days Based on the Neo KHGT Criteria Turkey 2016

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	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Sabtu	30-Jul-22	29	Sabtu	30-Jul-22	29	Sabtu	30-Jul-22	29
Safar	Ahad	28-Aug-22	30	Ahad	28-Aug-22	30	Ahad	28-Aug-22	30
Rabiulawal	Selasa	27-Sep-22	30	Selasa	27-Sep-22	30	Selasa	27-Sep-22	30
Rabiulakhir	Kamis	27-Oct-22	29	Kamis	27-Oct-22	29	Kamis	27-Oct-22	29
Jumadilawal	Jumat	25-Nov-22	30	Jumat	25-Nov-22	30	Jumat	25-Nov-22	30
Jumadilakhir	Sabtu	24-Dec-22	30	Ahad	25-Dec-22	29	Ahad	25-Dec-22	29
Rajab	Senin	23-Jan-23	29	Senin	23-Jan-23	29	Senin	23-Jan-23	29
Syakban	Selasa	21-Feb-23	30	Selasa	21-Feb-23	30	Selasa	21-Feb-23	30
Ramadan	Kamis	23-Mar-23	29	Kamis	23-Mar-23	29	Kamis	23-Mar-23	29
Syawal	Jumat	21-Apr-23	30	Jumat	21-Apr-23	30	Jumat	21-Apr-23	30
Zulkaidah	Ahad	21-May-23	29	Ahad	21-May-23	29	Ahad	21-May-23	29
Zulhijah	Senin	19-Jun-23	30	Senin	19-Jun-23	30	Senin	19-Jun-23	30

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	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Rabu	19-Jul-23	29	Rabu	19-Jul-23	29	Rabu	19-Jul-23	29
Safar	Kamis	17-Aug-23	30	Kamis	17-Aug-23	30	Kamis	17-Aug-23	30
Rabiulawal	Sabtu	16-Sep-23	30	Sabtu	16-Sep-23	30	Sabtu	16-Sep-23	30
Rabiulakhir	Senin	16-Oct-23	30	Senin	16-Oct-23	30	Senin	16-Oct-23	30
Jumadilawal	Rabu	15-Nov-23	29	Rabu	15-Nov-23	29	Rabu	15-Nov-23	29
Jumadilakhir	Kamis	14-Dec-23	30	Kamis	14-Dec-23	30	Kamis	14-Dec-23	30
Rajab	Jumat	12-Jan-24	30	Sabtu	13-Jan-24	29	Sabtu	13-Jan-24	29
Syakban	Ahad	11-Feb-24	29	Ahad	11-Feb-24	29	Ahad	11-Feb-24	29
Ramadan	Senin	11-Mar-24	30	Senin	11-Mar-24	30	Senin	11-Mar-24	30
Syawal	Rabu	10-Apr-24	29	Rabu	10-Apr-24	29	Rabu	10-Apr-24	29
Zulkaidah	Kamis	09-May-24	29	Kamis	09-May-24	29	Kamis	09-May-24	30
Zulhijah	Jumat	07-Jun-24	30	Jumat	07-Jun-24	30	Sabtu	08-Jun-24	29

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	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Ahad	07-Jul-24	29	Ahad	07-Jul-24	29	Ahad	07-Jul-24	30
Safar	Senin	05-Aug-24	30	Senin	05-Aug-24	30	Selasa	06-Aug-24	29
Rabiulawal	Rabu	04-Sep-24	30	Rabu	04-Sep-24	30	Rabu	04-Sep-24	30
Rabiulakhir	Jumat	04-Oct-24	30	Jumat	04-Oct-24	30	Jumat	04-Oct-24	30
Jumadilawal	Ahad	03-Nov-24	29	Ahad	03-Nov-24	30	Ahad	03-Nov-24	29
Jumadilakhir	Senin	02-Dec-24	30	Selasa	03-Dec-24	29	Senin	02-Dec-24	30
Rajab	Rabu	01-Jan-25	30	Rabu	01-Jan-25	30	Rabu	01-Jan-25	30
Syakban	Jumat	31-Jan-25	29	Jumat	31-Jan-25	29	Jumat	31-Jan-25	30
Ramadan	Sabtu	01-Mar-25	29	Sabtu	01-Mar-25	29	Sabtu	01-Mar-25	30
Syawal	Ahad	30-Mar-25	30	Ahad	30-Mar-25	30	Senin	31-Mar-25	29
Zulkaidah	Selasa	29-Apr-25	29	Selasa	29-Apr-25	29	Selasa	29-Apr-25	29
Zulhijah	Rabu	28-May-25	29	Rabu	28-May-25	29	Rabu	28-May-25	30

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	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Kamis	26-Jun-25	30	Kamis	26-Jun-25	30	Jumat	27-Jun-25	29
Safar	Sabtu	26-Jul-25	29	Sabtu	26-Jul-25	29	Sabtu	26-Jul-25	29
Rabiulawal	Ahad	24-Aug-25	30	Ahad	24-Aug-25	30	Ahad	24-Aug-25	30
Rabiulakhir	Selasa	23-Sep-25	30	Selasa	23-Sep-25	30	Selasa	23-Sep-25	30
Jumadilawal	Kamis	23-Okt-25	29	Kamis	23-Okt-25	30	Kamis	23-20-25	29
Jumadilakhir	Jumat	21-Nov-25	30	Sabtu	22-Nov-25	29	Jumat	21-Nov-25	30
Rajab	Ahad	21-Dec-25	30	Ahad	21-Dec-25	30	Ahad	21-Dec-25	30
Syakban	Selasa	20-Jan-26	30	Selasa	20-Jan-26	30	Selasa	20-Jan-26	30
Ramadan	Kamis	19-Feb-26	29	Kamis	19-Feb-26	29	Kamis	19-Feb-26	29
Syawal	Jumat	20-Mar-26	29	Jumat	20-Mar-26	29	Jumat	20-Mar-26	30
Zulkaidah	Sabtu	18-Apr-26	30	Sabtu	18-Apr-26	30	Ahad	19-Apr-26	29
Zulhijah	Senin	18-May-26	29	Senin	18-May-26	29	Senin	18-May-26	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Selasa	16-Jun-26	29	Selasa	16-Jun-26	29	Selasa	16-Jun-26	30
Safar	Rabu	15-Jul-26	29	Rabu	15-Jul-26	29	Kamis	16-Jul-26	29
Rabiulawal	Kamis	13-Aug-26	30	Kamis	13-Aug-26	30	Jumat	14-Aug-26	29
Rabiulakhir	Sabtu	12-Sep-26	30	Sabtu	12-Sep-26	30	Sabtu	12-Sep-26	30
Jumadilawal	Senin	12-Oct-26	29	Senin	12-Oct-26	30	Senin	12-Oct-26	30
Jumadilakhir	Selasa	10-Nov-26	30	Rabu	11-Nov-26	29	Rabu	11-Nov-26	29
Rajab	Kamis	10-Dec-26	30	Kamis	10-Dec-26	30	Kamis	10-Dec-26	30
Syakban	Sabtu	09-Jan-27	30	Sabtu	09-Jan-27	30	Sabtu	09-Jan-27	30
Ramadan	Senin	08-Feb-27	29	Senin	08-Feb-27	29	Senin	08-Feb-27	30
Syawal	Selasa	09-Mar-27	30	Selasa	09-Mar-27	30	Rabu	10-Mar-27	29
Zulkaidah	Kamis	08-Apr-27	29	Kamis	08-Apr-27	29	Kamis	08-Apr-27	30
Zulhijah	Jumat	07-May-27	30	Jumat	07-May-27	30	Sabtu	08-May-27	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Selasa	22-Apr-31	30	Selasa	22-Apr-31	30	Rabu	23-Apr-31	29
Safar	Kamis	22-May-31	30	Kamis	22-May-31	30	Kamis	22-May-31	30
Rabiulawal	Sabtu	21-Jun-31	30	Sabtu	21-Jun-31	30	Sabtu	21-Jun-31	30
Rabiulakhir	Senin	21-Jul-31	29	Senin	21-Jul-31	30	Senin	21-Jul-31	29
Jumadilawal	Selasa	19-Aug-31	30	Rabu	20-Aug-31	29	Selasa	19-Aug-31	30
Jumadilakhir	Kamis	18-Sep-31	30	Kamis	18-Sep-31	30	Kamis	18-Sep-31	30
Rajab	Jumat	17-Oct-31	30	Jumat	17-Oct-31	30	Sabtu	18-Oct-31	29
Syakban	Ahad	16-Nov-31	30	Ahad	16-Nov-31	30	Ahad	16-Nov-31	30
Ramadan	Senin	15-Dec-31	30	Senin	15-Dec-31	30	Selasa	16-Dec-31	29
Syawal	Rabu	14-Jan-32	30	Rabu	14-Jan-32	30	Rabu	14-Jan-32	30
Zulkaidah	Kamis	12-Feb-32	29	Kamis	12-Feb-32	29	Jumat	13-Feb-32	29
Zulhijah	Sabtu	13-Mar-32	29	Sabtu	13-Mar-32	29	Sabtu	13-Mar-32	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Ahad	11-Apr-32	30	Ahad	11-Apr-32	30	Ahad	11-Apr-32	30
Safar	Selasa	11-May-32	29	Selasa	11-May-32	29	Selasa	11-May-32	29
Rabiulawal	Rabu	09-Jun-32	30	Rabu	09-Jun-32	30	Rabu	09-Jun-32	30
Rabiulakhir	Jumat	09-Jul-32	29	Jumat	09-Jul-32	29	Jumat	09-Jul-32	29
Jumadilawal	Sabtu	07-Aug-32	30	Sabtu	07-Aug-32	30	Sabtu	07-Aug-32	30
Jumadilakhir	Senin	06-Sep-32	29	Senin	06-Sep-32	30	Senin	06-Sep-32	30
Rajab	Selasa	05-Oct-32	30	Rabu	06-Oct-32	29	Rabu	06-Oct-32	29
Syakban	Kamis	04-Nov-32	30	Kamis	04-Nov-32	30	Kamis	04-Nov-32	30
Ramadan	Sabtu	04-Dec-32	30	Sabtu	04-Dec-32	30	Sabtu	04-Dec-32	30
Syawal	Ahad	02-Jan-33	29	Ahad	02-Jan-33	29	Senin	03-Jan-33	29
Zulkaidah	Selasa	01-Feb-33	29	Selasa	01-Feb-33	29	Selasa	01-Feb-33	30
Zulhijah	Rabu	02-Mar-33	30	Rabu	02-Mar-33	30	Kamis	03-Mar-33	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Ahad	11-Mar-35	29	Ahad	11-Mar-35	29	Ahad	11-Mar-35	29
Safar	Senin	09-Apr-35	30	Senin	09-Apr-35	30	Senin	09-Apr-35	30
Rabiulawal	Rabu	09-May-35	29	Rabu	09-May-35	29	Rabu	09-May-35	29
Rabiulakhir	Kamis	07-Jun-35	29	Kamis	07-Jun-35	29	Kamis	07-Jun-35	30
Jumadilawal	Jumat	06-Jul-35	30	Jumat	06-Jul-35	30	Sabtu	07-Jul-35	29
Jumadilakhir	Sabtu	04-Aug-35	30	Ahad	05-Aug-35	29	Ahad	05-Aug-35	29
Rajab	Senin	03-Sep-35	30	Senin	03-Sep-35	30	Senin	03-Sep-35	30
Syakban	Rabu	03-Oct-35	29	Rabu	03-Oct-35	29	Rabu	03-Oct-35	29
Ramadan	Kamis	01-Nov-35	30	Kamis	01-Nov-35	30	Kamis	01-Nov-35	30
Syawal	Sabtu	01-Dec-35	29	Sabtu	01-Dec-35	29	Sabtu	01-Dec-35	30
Zulkaidah	Ahad	30-Dec-35	30	Ahad	30-Dec-35	30	Senin	31-Dec-35	30
Zulhijah	Selasa	29-Jan-36	30	Selasa	29-Jan-36	30	Rabu	30-Jan-36	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Senin	21-Nov-44	29	Senin	21-Nov-44	29	Senin	21-Nov-44	29
Safar	Selasa	20-Dec-44	30	Selasa	20-Dec-44	30	Selasa	20-Dec-44	30
Rabiulawal	Kamis	19-Jan-45	30	Kamis	19-Jan-45	30	Kamis	19-Jan-45	30
Rabiulakhir	Sabtu	18-Feb-45	30	Sabtu	18-Feb-45	30	Sabtu	18-Feb-45	30
Jumadilawal	Senin	20-Mar-45	29	Senin	20-Mar-45	30	Senin	20-Mar-45	30
Jumadilakhir	Selasa	18-Apr-45	30	Rabu	19-Apr-45	29	Rabu	19-Apr-45	29
Rajab	Kamis	18-May-45	29	Kamis	18-May-45	29	Kamis	18-May-45	29
Syakban	Jumat	16-Jun-45	29	Jumat	16-Jun-45	29	Jumat	16-Jun-45	30
Ramadan	Sabtu	15-Jul-45	29	Sabtu	15-Jul-45	29	Ahad	16-Jul-45	29
Syawal	Ahad	13-Aug-45	30	Ahad	13-Aug-45	30	Senin	14-Aug-45	29
Zulkaidah	Selasa	12-Sep-45	29	Selasa	12-Sep-45	29	Selasa	12-Sep-45	30
Zulhijah	Rabu	11-Oct-45	30	Rabu	11-Oct-45	30	Kamis	12-Oct-45	29

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Month	KIGT TURKI 2016			NEO KIGT TURKI 2016			WUJUDUL HILAL		
Muharram	Senin	21-Nov-44	29	Senin	21-Nov-44	29	Senin	21-Nov-44	29
Safar	Selasa	20-Dec-44	30	Rabu	21-Dec-44	29	Selasa	20-Dec-44	30
Rabiulawal	Kamis	19-Jan-45	30	Kamis	19-Jan-45	30	Kamis	19-Jan-45	30
Rabiulakhir	Sabtu	18-Feb-45	30	Sabtu	18-Feb-45	30	Sabtu	18-Feb-45	30
Jumadilawal	Senin	20-Mar-45	29	Senin	20-Mar-45	29	Senin	20-Mar-45	30
Jumadilakhir	Selasa	18-Apr-45	30	Selasa	18-Apr-45	30	Rabu	19-Apr-45	29
Rajab	Kamis	18-May-45	29	Kamis	18-May-45	29	Kamis	18-May-45	29
Syakban	Jumat	16-Jun-45	29	Jumat	16-Jun-45	29	Jumat	16-Jun-45	30
Ramadan	Sabtu	15-Jul-45	29	Sabtu	15-Jul-45	29	Ahad	16-Jul-45	29
Syawal	Ahad	13-Aug-45	30	Ahad	13-Aug-45	30	Senin	14-Aug-45	29
Zulkaidah	Selasa	12-Sep-45	29	Selasa	12-Sep-45	30	Selasa	12-Sep-45	30
Zulhijah	Rabu	11-Oct-45	30	Kamis	12-Oct-45	29	Kamis	12-Oct-45	29

Note: Data from 10 months when the KHGT criteria were met, the crescent moon in Saudi Arabia is still in a negative position compared to the 30 months of data studied.

The data in Table 1 above shows that:

1. The criteria of the Neo KHGT Turkey 2016 will ensure that Indonesia is always in alignment with Saudi Arabia.
2. If Saudi Arabia has not yet adopted KHGT 2016 while Indonesia has, the initial monthly differences between Indonesia and Saudi Arabia will continue to occur, as seen in the months of Jumadil Akhir 1446, Jumadil Akhir 1447, Jumadil Awal 1453, and Shafar 1467.
3. The position of the crescent moon in Saudi Arabia being negative when the KHGT 2016 criteria are met can occur in any month, including the month of Zulhijjah.
4. From the data of the 30 months above, it was found that the number of days in the Turkish Neo KHGT 2016 criteria corresponds with the synodic month cycle data, not less than 29 days, not more than 30 days, and the composition of the number of months consisting of 30 days and 29 days aligns with the synodic month cycle.

CONCLUSION

The above explanations are some of the arguments for including the criteria for the Wujudul Hilal in the city of Mecca in the 2016 Turkish KHGT Criteria. The implementation of the 2016 Turkish Neo KHGT Criteria is a cumulative criterion, which means that the combination of the two criteria must be met at the same time.

The 2016 Turkish Neo KHGT Criteria is a solution in the realisation of a single global Islamic calendar with the principle of one day one date throughout the world, because it can increase the chances of acceptance by Saudi Arabia and indirectly increase the chances of acceptance by other countries, and its application is more realistic to be realised at the world level.

AUTHOR CONTRIBUTIONS

Muhammad Hidayat plays a role in making manuscripts that suit the needs.
Abu Yazid plays a role in processing data
Marataon Ritonga plays a role in finding references

CONFLICTS OF INTEREST

The manuscript has not been published elsewhere and is not under consideration by other journals. All authors have approved the review, agree with its submission and declare no conflict of interest on the manuscript.

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