

EARTH'S FORMATION FROM THE QURANIC PERSPECTIVE

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Abstract

Quran is a book which is perfect in various aspects. Surah Ar-Ra'd verse 3 in the Quran wants to tell that the supernatural and the power of governing and administering only just from Allah SWT. It emphasizes that no one has the knowledge of the unseen and the power of governing nature except Allah SWT. The study was conducted to disseminate and analyze the discussion behind verse 3 Surah Ar-Ra'd. This verse proves the fact that only Allah SWT can create earth, mountains, rivers, night and day and this is a greatness for those who think. The objective of this study is to study how Islamic scholars and scientists make an explanation about the formation of earth without the existence of pillars such as houses, the role of the mountains, and the function of the rivers as water requirements to the earth and the occurrence of day and night. In doing research, there are a few methods to collect the data. First is scientific study and the second is field research. The researcher uses the scientific study to complete this research. The methodology used by researchers is qualitative. Qualitative methods that were used are books, journals and articles obtained from library research. By using the qualitative method, it helps the researcher to gain more information from any sources that recognized. The achievable result is that the researcher can know the scholars and scientists explain about the formation as related in Surah Ar-Ra'd verse 3.

Keywords: Surah Ar-Ra'd, earth, mountain, river, day and night

1 INTRODUCTION

Quran is a perfect guidance in various aspects to fulfill the desire of human being. It will be eternal here and hereafter with much knowledge that can be found. Quran is a holy book for Muslims. According to Islamic teachings, Quran is a revelation that God sent down to the Prophet Muhammad SAW through Jibril AS. Besides, Quran has a close connection with Lailatulqadar and was revealed to Prophet Muhammad SAW gradually in 23 years. Allah SWT has revealed the Quran as a miracle which proves the Prophet Muhammad SAW, and the existence of Allah SWT with all the attributes of His perfection. Reading the Quran and practicing is worship. It is a book of human life guidance and a major reference of Muslims besides the Hadith of Prophet Muhammad SAW. The Quran is mutually sympathetic (staged for its downfall), and the common mashaf found today is called Mashaf Uthmani. Al Quran itself has the miracle that the other book does not and was one of the miracles of our Prophet Muhammad SAW.

Besides, Quran also have many secret about the discovery that did not reveal yet. Therefore, as a human being, the miracle in the Quran will be found after we do a lot of research or finding. The development of the study of Quran has prompted the emergence of a new pattern in the interpretation of Quran. A Quranic verse

which is interpreted and approached by other scholars is categorized as good interpretation. In general, the interpretation is the science that describes the verse of Quran and describes the purpose of the verse according to human ability. In addition, Tafsir Ilmi is the sincerity of a person in finding verses of Quran with the invention of experiments to unravel the virtues of Quran as the source of appropriate science at all times (Udi, 2011).

Surah Ar-Ra'd is the 13th surah in the Quran and consists of 43 verses. This surah belongs to Makkiyah surah and called Ar-Ra'd which means thunder because in verse 13, Allah says that "And the thunder glorifies and praises Him". This verse shows the nature of holiness and perfection of Allah SWT and accordance with the nature of the Quran containing the threat and hope, then that's the sound of thunder that creates anxiety and hope for humans. The most important content of this surah is that God's guidance to His creatures is closely related to causality and law. There is no favor in determining punishment for Allah SWT in fact, the reply or punishment is the result and obedience or disobedience of God's law.

The arguments in this surah are a type of warning. It is not the same as other surah. This surah wants to tell about the supernatural and the power of managing and administering it from Allah. It emphasizes that no one else has this supernatural and governing authority. So there are two things that are emphasized in this surah which is knowledge and tasarruf. Surah Ar-Ra'd verse 3 tells the miracle of the creation and proves the fact that only Allah SWT can create heaven, mountains, rivers, day and night and this is a greatness for those who think. The verse of this surah shows that Quran already proves about the creation of earth and sky before scientist's findings (Celik Tafsir, 2017).

2 LITERATURE REVIEW

Based on the past research, researcher finds that some studies have been conducted and have a relation to the topic. The researcher takes the opportunity to get more information regarding this study based on several researches as stated:

First, Danial (2014) in updated edition of 'Quran Saintifik' tells about the majesty of God and the greatness of the Quranic miracles through Islamic and science glasses. The book also reveals in detail the latest scientific research and phenomena of science that proved by Quran. Next, article about the basic geology of earth formation theory tells about the history of the earth's formation and knowing the factors that encourage the formation of it (Allan, 2015). Ahmad (2011) in his thesis describes about the balance of earth's creation according to Quran and science. The creation of the earth is a creation of God in perfection and equality. Every creation of earth process is a sign of greatness for those who think.

In addition, Rizki (2015) reveals the theory of earth and sky creation discussed in Tafsir Al-Jawahir by Tantawi Jauhari. This thesis reveals the creation of earth and sky from scientific and Islamic views through verses in Quran. The writer of the thesis chooses Tafsir Al-Jawahir because the book has a complete of science data creation to study the creation of earth and sky. According to writer, Tantawi's opinion about the creation of earth and sky is tended to the theory of Big Bang by Edwin Hubble. Besides, Fuad (2016) also discusses the Tafsir Al-Jawahir but focused on the functions and role of the mountain. Next, the events of day and night occur because only part of the earth is facing towards the sun when it rotates on its orbit. The area of the earth facing the sun will experience daylight, while the backward area will experience night. As the earth rotates from the west of the east, the eastern part of the earth will receive sunlight or experience daylight first than the west (Aleevia, 2013).

3 RESEARCH METHODOLOGY

The word methodology comes from Greek consisting of two words "methodos" and "logos". Methodos means the way or technique and style of a study. Research is defined as a systematic data collection and analysis activity to break a question in the mind. There are two types of research methods: qualitative and quantitative. Researcher using qualitative research method because qualitative is a data in the form of information from identified sources. Qualitative data is available from books, journals, articles and pictures. A qualitative method that was used by researcher is books, journals and articles obtained from library research. Researcher also used the library study and it was conducted to study and find material references to obtain the necessary information about Surah Ar-Ra'd verse 3 through books, journals, articles and other references. By using the qualitative method, it helps the researcher to gain more information from any sources that recognized. Besides, it also the easy way to collect the data rather than the quantitative method. From the other side, the researcher can analyze all the information after collect and gather all the data.

4 DISCUSSION

Quran is a revelation that God sent down to the Prophet Muhammad SAW through Jibril AS. Allah SWT has revealed the Quran as a miracle which proves the Prophet Muhammad SAW, and the existence of Allah SWT with all the attributes of His perfection. In addition, Quran tells a lot about science that needs to be studied and perceived by humans and how it is created. As in Surah Ar-Ra'd verse 3 said about the creation of earth and also tells about mountain and river that people should study. In this verse also tells about the creation of day and night and how this phenomenon was happened.

4.1 Earth

4.1.1 Definition of Earth

Earth is a planet that being in the third order from the sun and the fifth largest planet of all planets. Earth can also be as a home to all living beings with experiencing rotation and revolution. The earth takes about 24 hours to make a full rotation in its orbit while the revolution turning around the sun which takes about 365 days. The rotation of the earth may result day and night shifts and the occurrence of time differences between different countries while the revolution resulted in seasonal change in all continents in the world and changing the time of day and night (Ilmu Geografi, 2016).

In addition, earth is a planet that surrounds the sun with a distance of 149.6 million km. The diameter of the earth is about 17,560 km while the mass of the earth is about 598x 1000ton (Budianto, 2006). Earth is closest state to the sun in January with a distance of 147.0 million km and the farthest distance is about 152.0 million km on six months later (Stuart, 2008).

4.1.2 Earth Layer

The earth has 3 layer structured as follows (Abdul, 1996):

- 1) Crust
- 2) Mantle
- 3) Core earth

The first layer is Crust. Crust is an outer shell (surface of the earth) with a mass of 0.3% of the total mass of the earth. The thickness of the crust layer reaches 70 km as a rock layer composed with rocks and sandstones. This layer is as a home to all living things. The temperature at the bottom of the crust reaches 1.100 °C and the top layer of the crust is called lithosphere (Linda, 2012).

Next, the second layer is Mantle. Mantle is a layer that lies beneath the crust layer or can be found on the layer of nife (niccolum = nickel and ferrum = iron). Mantle is also called intermediate layer or asthenosphere and has a high temperature liquid and incandescent. The thickness of the layer reaches 2,900 km and its average weight is 5 gr / cm while the temperature at the bottom of the earth blanket reaches 3,000 °C. In addition, mantle is a source of melting rocks that become volcanic magma which are made from magnesium, silicon, oxygen, iron and aluminum (Budianto, 2006).

The last layer is called Core Earth (line or core). Core earth is a solid material composed of a layer of nife (niccolum = nickel and ferrum = iron). The existence of this nickel and iron material has caused a great magnetism. Moreover, the core layer is divided into outer core and inner core. The outer core is about 2,000 km thick and consists of a liquid plant with temperature reaches about 2.200 °C while the inner core is a ball-centered with a diameter of 2,700 km and consists of darine and iron with the temperature reaches 4,500 °C (Linda, 2012).

4.1.3 The Formation of Earth According Quran

Quran is not much mentioned about the formation of earth itself. Therefore, there is a support of the explanation of the creation of sky and earth when it was first created. In fact, the creation of the earth does not take six days as it is found in Surah Fussilat verse 9-11:

“Say, ‘Do you really disbelieve in Him who created the earth in two days and ascribe partners to Him? That is the Lord of all the worlds!’ (9) He set in it firm mountains [rising] above it, and blessed it and ordained therein its [various] means of sustenance in four days, alike for all the seekers [of the means of sustenance] (10) Then He turned to the heaven, and it was smoke, and He said to it and to the earth, ‘Come! Willingly or unwillingly!’ They said, ‘We come heartily (11)’ (Surah Fussilat verse 9-11)

In addition, Quran also discussed about the creation of sky and earth within six days as in Surah As-Sajdah verse 4:

“It is Allah who created the heavens and the earth and whatever is between them in six days then He settled on the Throne. You do not have besides Him any guardian or intercessor. Will you not then take admonition?” (Surah As-Sajdah verse 4)

There are also explanations about the chronology of sky and earth creation in six phase discussed in Surah An-Nazi'at verse 27-33:

“Is it you whose creation is more prodigious or the sky which He has built?(27) He raised its vault, and fashioned it (28) And darkened its night, and brought forth its day (29) And after that He spread out the earth (30) And brought forth from it its water and pastures (31) And set firm the mountains (32) As a [place of] sustenance for you and your livestock (33)” (Surah An-Nazi'at verse 27-33)

First: Verse 27 described the creation of the universe with a process called Big Bang (a big explosion) as the first sign of the formation of space and time.

Second: Verse 28 explained the expansion of the universe and gives understanding about the formation of the sky is not the first process but the evolutionary process.

Third: Verse 29 described the existence of the solar system that also occur to the other stars and also discussed the creation of the sun that shining the earth rotation in forming day and night.

Fourth: Verse 30 explained the process of earth's evolution and described the earth was stranded.

Fifth: Verse 31 stated that early creation of life on earth is by providing water.

Sixth: Verse 32 and 33 explained about mountains arise as an effect of geological evolution and the creation of animals and humans (Lajnah Pentashihan Mushaf Al-Quran, 2010).

The theory of earth's formation is from the accretion process according to Otto Schmidt's view. He is a geophysical expert from Russia and the theory that he created became popular today. The process of earth's formation is through a particular phase as in Surah Az-Zukhruf verse 10, Allah explains that “He made the earth for you as a dwelling place and He made roads for you on earth so that you might be guided”. In this verse, Allah uses the word “*mahda*” when narrating the earth. According to Hans Wehr, the word comes from “*mahada*” which means to spread out evenly or to make easy (Cowan, 1979). This analogy describes the earth as a spreadsheet to facilitate human's activity on the earth (Danial, 2014).

Then, in Surah Ar-Ra'd verse 3, Allah explains "And He is the God who stretched out the earth and made the mountains and rivers in it. And to him all the fruit of pairs, Allah closet the night to day. Verily in these are Signs for people who think". In this verse, Allah uses the word “*madda*” and according to Hans Wehr, it is brings the meaning of to extend, distend, expand, dilate and stretch. This verse shows the earth is not static but continues to widen and grow and this will defend the opportunity used by infidels who say that the Quran is not scientific because these verses indicate that the earth is flat and not sphere (Danial, 2014).

4.2 River

4.2.1 The Importance of The River For The Earth

Water can be found almost everywhere in the world as it is one of the most important sources of life for human being. Therefore, human, animals and plants on earth cannot live without water. In addition, the earth can store enough water for living things on the earth due to the accurate gravity as water is one of the most abundant molecules on earth. There are about 350 million cubic kilometers of water in this planet where 97% of the water is found in the ocean which includes two-thirds of the planet's surface area. Approximately 90% are frozen ice in the north and south poles and as much as 1% of all the water in the earth is available in consumption and most are found in underground aquifers. Besides, oxygen is very important for human and it is one of the elements of water that consists approximately 70% of human body (Lerner & Lerner, 2004).

A. E. Needhem a biochemist shows on how important of life's formation. If the law of the universe only allows the existence of solids and gas, then there will never be a life. The reason is that the atoms of solid matter binds too closely and too static as in no way allows the dynamic molecular process to be important for the occurrence of life. In fact, the atoms move freely in the gas and the complex life-forms mechanism is not functions in such a structured. Therefore, the liquid environment is absolutely necessary for the formation of life. In conclusion, this object is due to the exact size of the earth that allows the formation of life on earth (Harun, 2000).

4.3 Occurrence of Day and Night

4.3.1. Definition of Occurrence of Day and Night

The occurrence of day and night are amongst the signs of greatness of Allah SWT. This is because, day and night is a common phenomenon that can see and be a great benefits for the survival process for all beings in the world (human, animals, and plants). In that way, Allah SWT always tells about the occurrence of day and night to invite humans to think about this nature by an extraordinary substance. Day and night events occur because of the rotation of the earth. Due to this factor, some area of the sun-shielded the earth is darkness, which is called 'night' while the area of the earth exposed to sunlight is called 'day'. This process occurs as the earth rotates on its orbit at the cos angle (28.59) while rotating around the sun (Aleevia, 2013).

4.3.2 Occurrence of Day and Night According Quran

Surah Al-Furqan verses 47 and 62 mentioned about the occurrence of day and night:

"It is He who made for you the night as a covering and sleep for rest and He made the day a recall to life" (Surah Al-Furqan verse 47)

This verse proves the power of Allah SWT which is the presence of sunlight starting from rising to sunset is connecting with day and night. In addition, the words "the night as a dress and sleep for rest" explains that all occupations or activities will be delayed so that humans can rest and collect energy for the next day's work.

"It is He who made the night and the day alternate for one who desires to take admonition, or desires to give thanks" (Surah Al-Furqan verse 62)

Thahir ibn 'Asyur argues that this verse provides that every person should think about the occurrence of day and night. Besides, Sayyid Quthub interpreted this verse on how great the power and precision of His arrangement. "Earth rotates on its orbit once every 24 hours or about a thousand miles per hour. If the earth is only rotating only at 100 km/h, then the night and the day will be longer than the original condition. The sunlight will burn all life on earth during the day and freeze it at night. So verily Allah SWT has bestowed His grace and kindness upon His creatures. This is what people should be pondering and grateful" (Al-Haqqu, 2015).

5 CONCLUSION

There are many miracles found in the Quran as Allah revealed to the Prophet Muhammad SAW to be distributed to human so that people are impressed with the greatness of Allah SWT. Quran and science are inseparable. This is proved with every scientific information written in Quran when scientifically studies will find the amazing results. In other words, all the scientifically studied is same and parallel to what is mentioned in the Quran.

As in the example in Surah Ar-Ra'd verse 3, Allah tells about the earth, the mountain, the river and the occurrence of day and night is a greatness for those who think about it. The creation of earth, mountains, rivers and occurrence of day and night is a sign of greatness that shows the existence of God. If anyone says that the creation of God is just coincidence or fairy tales then it is clear that he is regarded as blind. How can a perfect system in the creation of Allah SWT be a coincidence that can move and process accurately for human life?

With the existence of mountains as a peg and water storage, the earth can stand strong and allows living things to keep alive. The unique creation of Allah SWT and the things created by Allah SWT are all related to each other. How bad is it if people are not grateful for the perfect balance provided by Allah SWT. All things that Quran has mentioned, as a creature we cannot deny about it but accept it for the sake of Allah. In addition, the occurrence of day and night is amongst the many signs of greatness of Allah SWT. This is because, day and night is a common phenomenon that can see and be a great benefits for the survival process for all beings in the world.

Lastly, the greatness of Allah SWT creates the universe with a balanced state that supports life and becomes a human being as a caliph on earth so that human beings responsible to manage this earth well and keep the earth in harmony. The researcher hopes that Muslims do not forget that science is a sign of the greatness of Allah SWT. With the links of Quran and science, it can reveal a truth that is still in doubt by some people. In addition, this can make people more interested to approach, read and *tadabbur* the Quran.

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