

CARBON TRADING: AN EFFECTIVE WAY TO MANAGE NATURAL RESOURCES BASED ON LOCAL WISDOM

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Abstract:

This article discusses the potential for local wisdom-based carbon trading in Central Kalimantan, highlighting CO2 emissions as the main cause of global warming triggered by human and industrial activities. High levels of CO2 emissions in Indonesia, including in Central Kalimantan, have led to increased air pollution and serious health impacts. Sustainable industrial activities without prevention or reduction efforts risk causing disasters for humans and the earth. Industrial development as a major contributor to CO2 emissions requires mitigation solutions that integrate the local wisdom of the Dayak people. Uses a descriptive-qualitative method with a literature approach involving books, journals, and articles related to carbon trading and local culture in Central Kalimantan. The integration of the carbon market with the local wisdom of the Dayak people has great potential for sustainable development in Central Kalimantan. This article highlights the role of the carbon market in reducing greenhouse gas emissions through the use of forests as carbon sinks and shows that carbon trading can improve the economic welfare of forest communities and preserve biodiversity and local knowledge. By integrating the carbon market and local wisdom, Central Kalimantan has the potential to become a major center for CO2 emission reduction and community welfare improvement. This collaboration will provide economic benefits and serve as a step toward nature conservation, particularly forests, by empowering surrounding communities. This activity will be examined from an Islamic economic perspective to assess its suitability and positive impact, while also encouraging forest conservation through community empowerment and the financial benefits generated.

Keywords: *carbon trading; Central Kalimantan, local wisdom, Islamic economic*

Abstrak:

Artikel ini membahas potensi perdagangan karbon berbasis kearifan lokal di Kalimantan Tengah, dengan menyoroti emisi CO2 sebagai penyebab utama pemanasan global yang dipicu oleh aktivitas manusia dan industri. Tingginya tingkat emisi CO2 di Indonesia, termasuk di Kalimantan Tengah, telah menyebabkan peningkatan polusi udara dan dampak kesehatan yang serius. Aktivitas industri yang berkelanjutan tanpa upaya pencegahan atau pengurangan berisiko menyebabkan bencana bagi manusia dan bumi. Pengembangan industri sebagai kontributor utama emisi CO2 memerlukan solusi mitigasi yang mengintegrasikan kebijaksanaan lokal masyarakat Dayak. Menggunakan metode deskriptif-kualitatif dengan pendekatan literatur yang melibatkan buku, jurnal, dan artikel terkait perdagangan karbon dan budaya lokal di Kalimantan Tengah. Integrasi pasar karbon dengan kebijaksanaan lokal masyarakat Dayak memiliki potensi besar untuk pengembangan berkelanjutan di Kalimantan Tengah. Artikel ini menyoroti peran pasar karbon dalam mengurangi emisi gas rumah kaca melalui penggunaan hutan sebagai penyerap karbon, serta menunjukkan bahwa perdagangan karbon dapat

meningkatkan kesejahteraan ekonomi komunitas hutan dan melestarikan keanekaragaman hayati serta pengetahuan lokal. Dengan mengintegrasikan pasar karbon dan kebijaksanaan lokal, Kalimantan Tengah memiliki potensi untuk menjadi pusat utama dalam pengurangan emisi CO₂ dan peningkatan kesejahteraan komunitas. Kolaborasi ini akan memberikan manfaat ekonomi dan menjadi langkah menuju konservasi alam, khususnya hutan, dengan memberdayakan komunitas sekitar. Kegiatan ini akan dievaluasi dari perspektif ekonomi Islam untuk menilai kesesuaian dan dampaknya yang positif, sekaligus mendorong konservasi hutan melalui pemberdayaan komunitas dan manfaat finansial yang dihasilkan.

Kata Kunci: *Perdagangan karbon; Kalimantan Tengah, kearifan lokal, ekonomi Islam*

INTRODUCTION

Today, there has been a lot of news, and news has been heard that nature and the environment we live in today have suffered much damage due to many factors. One of them is artificial. Reported via Antara (Antara, 2023), According to NDMA or the National Disaster Management Authority, there were 1,862 disasters from January to July 2023 caused by humans (human-made). This happens due to several activities, such as illegal logging, industrial activities, and land use change. The global temperature increase is caused by carbon release due to human economic activities. These carbon emissions will impact temperatures worldwide over a long period and with uneven geographic variation (Cruz & Rossi-Hansberg, 2021).

Global climate change is an environmental problem now a significant challenge that needs to be addressed urgently. As reported through The Conversation page (Forster, 2023), Greenhouse gas emissions on our planet are now at an all-time peak, with an annual amount of 54 billion tons of CO₂ equivalent. This is driven by the development of human civilization, which caused an increase in the earth's surface temperature to reach 1.14 degrees Celsius at the end of the 19th century, which is a rapid increase of 0.2 degrees Celsius every decade. As carbon emissions increase, global temperatures also rise. In addition to health problems, global warming can cause disasters such as floods, droughts, and fires that ultimately impact agriculture, ecosystems, and infrastructure. Global warming is also affecting melting ice in the Arctic, threatening the lives and habitats of many species.

Global environmental problems began to emerge along with the development of industrial and technological activities. According to Rypdal in the IPCC National Greenhouse Gas Inventory Guidelines, carbon dioxide (CO₂) emissions are one type of greenhouse gas emissions that cause global warming. Global warming is closely related to human activities. According to the Intergovernmental Panel on Climate Change (IPCC), several sectors significantly impact global warming, including energy use, industrial processes, land use and forestry, and waste. In particular, industrial activities such as the production of cement, iron and steel, paper, petrochemicals, ceramics, and the use of carbonate materials in the production process are significant contributors to CO₂ emissions (Y. M. Pratama, 2021).

As noted on the data page Indonesia. id (*8 Kota Dengan Tingkat Polusi Tertinggi Di Dunia, 15 Agustus 2023*, 2023), Carbon emissions exacerbate air pollution. Jakarta, one of the cities in Indonesia, ranks as the fourth most polluted city in the world. Air pollution that causes a decrease in air quality is closely related to the number of people with respiratory diseases, both toddlers and adults. The World Health Organization (WHO) states that about 3.8 million premature deaths occur due to air pollution. The causes of death were pneumonia as much as 27%, stroke as much as 18%, chronic obstructive

pulmonary disease as much as 20%, ischemic heart disease as 27%, and lung cancer as much as 8%. (Sudaryanto et al., 2022). Some hydrocarbon components in vehicle exhaust, such as polycyclic aromatic hydrocarbons (PAHs) in diesel particulates, are known to cause cancer. Carbon emissions can also affect your blood's ability to carry oxygen, thus worsening heart disease (Strategi et al., 2021).

Energy consumption and industrial activities have a significant impact on generating carbon emissions and causing global warming. In 2022, it is estimated that human activities will produce CO₂ emissions of 40.6 billion tons, while the earth's sequestration capacity will only bear as much as 380 billion tons of CO₂ in the next few years. This amount of annual emissions in 2022 seriously threatens global climate stability. If emissions trends do not change, there is a 50% chance that average global temperatures will increase by 1.5°C within nine years (Jozwiak, 2022).

Forests are a much-needed sink of carbon emissions to address this. With the absorption of these emissions, it will automatically be able to reduce the effect of greenhouse gases to reduce the impact of global warming. Carbon trading is an innovative solution to mitigate these impacts (Azizi MJ et al., 2023). Besides helping overcome environmental issues, of course, carbon trading also positively affects the economy of communities around forests and the country through empowerment.

Central Kalimantan is one of the provinces still firmly held by its tribal culture, the Dayak Tribe. Some local wisdom that was born continues to be maintained to this day. Dayak people appreciate the nature around them. This is shown by the prohibition of excessive exploitation of forests through cultural and customary law.

Islam also pays great attention to the sustainability of the environment. Many words of Allah Almighty show this in several letters in the holy book of the Quran, one of which is Surah Al-A'raf verse 56, which prohibits humans from damaging nature. Another thing is also seen in some hadiths of the Prophet Muhammad and the science of Fiqh Bi'ah, which focuses on nature and the environment.

RESEARCH METHOD

Qualitative descriptive research is a type of research used to produce valuable outputs and results. This research uses a library research approach or literature study, which makes books and research journal articles related to carbon trading, Dayak culture, and Islamic economics as the primary sources, and secondary sources of this research are books related to this research theme and several articles from the internet. The discussion of this research uses a qualitative approach that is examined holistically.

This study aims to explain the Islamic economic view of carbon trading associated with Dayak culture as a potential that supports the project. This is because it is so bad, and the magnitude of the greenhouse effect impacts global warming, the main trigger of carbon dioxide (CO₂) emissions, which are the residual results of several industrial activities. Therefore, this study discusses the Islamic view of carbon trading as an effort to reduce the adverse effects of CO₂ emissions.

Researchers use documentation to search for and collect related elements or variables in the study, including journal articles, books, and some articles on the internet related to the problem under study. Researchers establish the basis of this study by collecting data from various sources, which is done gradually or from one aspect to the next.

This study used a qualitative descriptive data analysis method. This data is obtained from a literature study on Islamic economic perspectives on carbon trading, which will provide a detailed picture of this research.

FINDINGS AND DISCUSSION

1. Carbon Trading System

Carbon trading is a market system that uses a mechanism for negotiating and exchanging rights for greenhouse gas emissions. The Kyoto Protocol regulates this market mechanism, which can take place both at the national and international level, as long as the rights of negotiation and exchange are allocated fairly to all market participants. The ability to accurately calculate the amount of carbon stored is required to assess the value of forest land in terms of carbon storage potential. Using the latest technology, such as satellite imagery and computer modeling, can facilitate calculating carbon stocks quickly and accurately (Purnobasuki, 2012). Carbon trading involves buying and selling carbon credit certificates instead of carbon or gas. In this context, traded goods are efforts to control or reduce carbon emissions, represented in carbon credit certificates (Tampubolon, 2022).

Carbon trading plays a significant role in reducing carbon emissions in Indonesia. Using carbon trading mechanisms, Indonesian businesses can help reduce carbon emissions by selling carbon credits to other companies. This encourages businesses to adopt eco-friendly practices and improve energy efficiency, reducing emissions nationwide. Carbon trading in Indonesia has several advantages. For example, it can help Indonesia achieve its Paris Agreement carbon emissions targets on climate change. Using carbon credit trading, countries or companies that produce carbon emissions can purchase carbon credits from other countries or companies that have successfully reduced their carbon emissions. Conversely, governments or companies that have successfully reduced their carbon emissions can sell their carbon credits to other countries or companies that still need to reduce their carbon emissions. This can help reduce overall carbon emissions (Cadizza, 2024). Carbon trading is the trading of carbon credit certificates. The goods being traded are carbon credit certificates, indicating that efforts have been made to reduce CO₂ emissions in the air through activities and projects related to reducing greenhouse gas emissions. So, carbon pollutants in the air are not sold in this buying and selling activity (Azizi MJ et al., 2023). Carbon trading has conditions like general trading, including sellers, buyers, prices, goods, and agreements. As mentioned earlier, the object traded is a certificate of reduction in greenhouse gas (GHG) emissions with a size of tons of CO₂. Carbon trading trades six types of greenhouse gases listed in the Kyoto Protocol. In carbon markets, carbon credits are products of reduced carbon dioxide (CO₂) emissions, which have been certified and meet applicable requirements and requirements. Typically, one ton of carbon dioxide (CO₂) is converted into one unit of carbon credit (Husen, 2018). Each unit that produces specific carbon emissions will have a quota. If the carbon emissions produced exceed the given quota, the unit can buy quotas or credits from other units with quota allotments.

At that time, Dr. Siti Nurbaya, Minister of Environment and Forestry, represented the President of the Republic of Indonesia when signing the Paris Agreement. After the Paris Agreement, the Indonesian government issued Law Number 16 of 2016. The Paris Agreement stipulates that Indonesia will reduce greenhouse gas (GHG) emissions by 29% by 2030, compared to 2010 by its efforts and means, and with the help of other countries, will reduce GHG emissions by 41%. The Government of Indonesia expresses this commitment through nationally determined contributions through Nationally Determined Contributions (NDCs) (Barus & Wijaya, 2022). This agreement shows that the Indonesian government will actively participate in reducing greenhouse gas emissions.

This carbon trading system fulfills the Paris Agreement and the Indonesian

government's efforts to address environmental issues. By reducing carbon emissions, the sustainability of living things and the environment will be better, and the effect of greenhouse gases can be reduced.

2. Local Culture of the Dayak Tribe

Culture is a mechanism derived from hereditary behavior patterns in the social sphere. This pattern will work interconnectedly between the human community and its ecological environment. This "group way of life" also includes technology and the form of some community or economic organization, fixed patterns, social groupings, political organizations, religious practices and beliefs, and other forms. Suppose culture is widely seen as a system of behavior peculiar to a population, a connector, and harmonizer of human physical conditions. In that case, the view of culture as pattern-of or pattern-for is the second problem. Culture comes from patterns of behavior tied to specific groups, such as customs or how humans live (A. Pratama, 2013). One of Indonesia's provinces on the island of Kalimantan is Central Kalimantan. Palangkaraya City is its capital. The area of Central Kalimantan is 153,564.60 km². According to the 2010 census, the province has 2,202,599 inhabitants, with 1,147,878 males and 1,054,721 females. According to Central Kalimantan BPS data in 2019, the population of this province increased to 2,660,209 in 2018, with 1,391,078 males and 1,269,131 females. Central Kalimantan has thirteen regencies and one city (Central Borneo Guide, 2024).

There are approximately 405 sub-tribes or ethnicities on the island of Kalimantan alone. Even with hundreds of them, these sub-tribes still have some characteristics and similarities culturally and in others (Itsnaini, 2021). The Ngaju tribe, the largest sub-ethnic of the Dayak tribe in Central Kalimantan, has a fairly wide distribution. They are mainly concentrated in Palangka Raya City, Pulang Pisau Regency, Gunung Mas Regency, and Kapuas Regency and scattered in other districts throughout the Central Kalimantan region. The culture and customs of the Dayak Ngaju people are very diverse. However, not many cultures of the Dayak Ngaju tribe are publicized because their culture and customs are only spread by word of mouth. Although the Dayak Ngaju tribe is the largest parent tribe of the four other tribes living in the Kapuas watershed, the sub-tribe consists of 53 children of the Dayak Ngaju tribe, eight children of the Ma'anyan tribe, 21 children of the Lawangan tribe, and 24 children of the 1979 Dusun Riwut. Dayak Ngaju culture consists of spoken and non-verbal language. The local wisdom of the Dayak tribe consists of communicated and uncommunicated cultures, such as oral traditions or relicts. The Dayak Ngaju community not only has wealth in the form of oral folklore, some in the form of oral, but also rich in non-oral folklore. This non-oral folklore is part of the items owned by the Dayak Ngaju community as an artistic expression in Central Kalimantan. The types of goods owned by the Dayak Ngaju community generally contain magical values and cultural symbols (Lastaria et al., 2022).

Many verbal and non-verbal symbols are found in the local wisdom of the Dayak community that are interrelated to protect and preserve the environment to realize harmony and balance between nature and humans. These symbols guide action and explain their meaning in Dayak culture, especially the Ngaju Dayak Tribe in Central Kalimantan Province. In the dynamics of forest management in Central Kalimantan, Batang Garing, known as the Tree of Life by the Dayak people, symbolizes the balance between humans and nature. In addition to functioning to meet human needs, forests must also fulfill their rights to maintain the environment and natural resources that will be passed on to the next generation. A message or peteh lives in Dayak society: "Ingat peteh Tatuh Hiang, petak danum akan kolenen harian andau" meaning remember the message

from ancestors, land and water for the next human life. This concept forms the foundation for the sustainable utilization of wealth alam (Usop, 2020).

The culture of handep hapakat, or cooperation, is a value found in various activities and local wisdom of the Dayak tribe. One of them is from human activities. They grew crops known as manugal, which began by hollowing out the soil with wooden sticks and then sowing plant seeds. The repudiation or people who are manugal will cooperate. Man urgently needs nature, created by God, to meet his needs, so human activities also pay attention to preserving nature. A sense of need and bonding is the foundation of good forest management. Because human activities will be disrupted if the forest is damaged (Djungan, 2021). Although some human activities still use the traditional way of clearing land, namely by burning, at this time, the community has begun to make the rest of the land clearing as organic fertilizer without burning as before.

The terms "tajahan" and "pukung himba" are part of local culture in forest management. Tajahan is considered a protected location by the Dayak tribal community, especially those who adhere to the kaharingan faith. This place has a small house with small statues that are considered the house of spirits. People believe that these statues are representations of family members or relatives who have died, and their function is to prevent them from disturbing the surviving family. In addition, Himba trawls are jungles that should not be cleared or exploited. This is because the trees are giant and old and have never been damaged by humans, so there is still much wildlife in them (Hujjatusnaini, 2016). It is forbidden to cut trees, hunt, or perform other actions that are considered to violate the pali in these two locations, which still seem haunted. This Pali is deemed to be able to harm those who violate it. In addition, according to Dayak beliefs, forest guardian spirits (Gana) are sent to the himba pukung area for rituals at the time of land clearing. In this situation, it sounds too mystical. However, if reasoning and understanding are carried out, it can be concluded that banning in the area positively impacts forest conservation.

Furthermore, the customary laws of the Ngaju Dayak tribe such as jipen and singer, are still applied by the people of Central Kalimantan. It is a customary fine imposed on a person who has committed an offense to the environment (nature) or a fellow human being. In 2018, PT Sawit Mandiri Lestari was fined Rp5,000,000,000 for destroying customary forests in Lamandau Regency, Central Kalimantan Province. In addition, perpetrators who use poison to catch fish in the Pangkut Village River in West Kotawaringin Regency are also fined Rp5,000,000. In these cases, the fine may change depending on how much or small the damage is caused by the perpetrator's actions (Setiawan & Lisnawati, 2023). The customary law and customary fines applied show the Dayak people of Central Kalimantan's concern for environmental sustainability.

3. The Implementation of Carbon Trading in Central Kalimantan Province

With carbon trading, Central Kalimantan Province gets new economic opportunities, which will also impact communities around forests. Well-maintained forests sequester atmospheric carbon, and forest management can yield financial benefits. Carbon trading and industrial and technological advances are crucial to reducing greenhouse gas emissions that damage the Earth's atmosphere. These greenhouse gas emissions cause the world to become hotter and result in a dangerous climate crisis. Indonesia's carbon market is still voluntary (Djaenudin et al., 2016). The same is the case with carbon trading implemented in Central Kalimantan Province.

According to the Paris Agreement in 2015, the Katingan Mentaya project, overseen by PT Rimba Makmur Utama (RMU) in Central Kalimantan, conducts carbon

trading through carbon offsets. The Katingan Mentaya project, or KMP, conserves forests processed through carbon service businesses. Two strategies can be applied in carbon markets: trading and credits.

KMP uses a carbon offset system to operate. This means reducing carbon production in one location to offset excessive carbon production in another. In other words, carbon offsets are a reimbursement method for companies that produce carbon dioxide emissions by seeking to reduce their effects by reducing emissions in different regions. Over a 60-year concession period, an average of 7.5 million tonnes of CO₂ was stored yearly. This means eliminating emissions from 2 million cars annually in this KMP forest area. This results from carbon calculations of the Verified Carbon Standard (VCS) and Community and Biodiversity Standards (CCB). These carbon stores are sold using a carbon trading system known as carbon offsets. The proceeds will maintain and protect the ecosystem and help fund the company (Ulfa, 2023).

The existence of a carbon trading system shows community participation in terms of empowerment provided by the government and related private parties. On this occasion, the community participated in the empowerment carried out by PT Rimba Makmur Utama in collaboration with the Puter Foundation. These activities include rubber tree planting, fish farming, handmade souvenir making, and other activities without harming nature. The local Dayak Customary Council has power in its administrative area. DAD is tasked with resolving land disputes between companies and communities and maintaining forest and natural ecosystems by Dayak customary law and the belief in harmony and balance between humans and nature (Sukadi et al., 2020).

In addition, this KMP has succeeded in protecting the largest peat forest area in Southeast Asia, covering an area of 149,800 hectares, home to Central Kalimantan orangutan species such as Bornean proboscis monkeys (*Nasalis larvatus*), South Borneo Gibbons (*Hylobates albifrons*), and Bornean Orangutans (*Pongo pygmaeus*). Carbon trading benefits economic, social, and environmental sustainability, especially in the Central Kalimantan region, where there are many forests and the potential for local wisdom to support.

In addition, according to the Peatland and Mangrove Restoration Agency of the Republic of Indonesia (BRGM), mangrove forests have four to five times the carbon stock compared to terrestrial forest types. According to research conducted by the Indonesian Institute of Sciences (LIPI), Indonesia's mangrove forests can suck 52.85 tons of CO₂/ha per year. Thus, Indonesia has potential reserves to absorb or suck 177.8 million tons of CO₂/ha per year (Siagian & Arifin, 2022). In addition, Central Kalimantan has many mangrove forests, which can serve as carbon sequestration reserves. This is especially true for carbon trading in Central Kalimantan. The mangrove forest area, which includes Kahayan Kuala and Sebangau Kuala Districts, has a potential of approximately 17,574.12 hectares according to data provided by the Environment Office (DLH) of Pulang Pisau Regency, Central Kalimantan (Redaksi Metro, 2022). Mangrove forest areas and other forests on the mainland of Central Kalimantan have enormous economic potential, especially related to carbon trading. Therefore, all types of forests in Central Kalimantan require good management and preservation.

4. Carbon Trading in Sharia Economic Perspective

The Islamic economic system is based on Islamic Shari'a, or the rules of Allah. This system is centered on Allah, with the ultimate goal being Allah, and uses methods that cannot be separated from Islamic law. Whether in buying and selling, saving and borrowing, or investment, man's economic actions must be by God's provisions.

According to Islamic belief, treasure belongs to Allah entirely, and man serves as caliph over that treasure. In addition, the religion of Islam strictly prohibits acts such as Maishir, Gharar, Haram, Dzalim, Ikhtikar, and Riba (Ansori, 2016). Islamic economic theory is a field of social science that studies how Islamic values affect the economic life of society. Islamic economics and modern economics are the same in terms of significant issues. There is a difference between its properties and volume. Therefore, the main difference between the two systems of economic science can be found by considering how the problem of choice is handled (Bakar, 2020). The concept of tawhid, namely the Islamic belief in the oneness of God, is the basis of Islamic economic principles. Other principles, such as the concept of zakat, namely, a person's obligation to give some of their wealth to people in need, are based on this concept. The prohibition of speculation (gharar), gambling (maysir), and interest (riba) is another principle of Islamic economics. One of the main goals of Islamic economics is to create a just and equitable society by ensuring that wealth is distributed fairly. The market is seen in Islamic economics as a means to achieve this goal, not as an end. The government is responsible for ensuring that economic activities are conducted by Sharia and providing a safety net for those in need (Prakoso, 2023).

Islam is very concerned about the preservation of the surrounding environment. In Islamic economics, the term maslahah is used. Maslahah is divided into two, namely al-mashlahah and al-muthabarah, in which maslahah is used as evidence and signs, and there is no doubt in its implementation. Then the second is al-maslahah al-mursalah, which is defined as a benefit to humans and does not invite or cause harm and evil (Achyar & Hakim, 2023). In Q.S. Al-A'raf verse [56] which reads:

وَلَا تُفْسِدُوا فِي الْأَرْضِ بَعْدَ إِصْلَاحِهَا وَادْعُوهُ خَوْفًا وَطَمَعًا إِنَّ رَحْمَةَ اللَّهِ فَرِيْبٌ مِّنَ الْمُحْسِنِينَ

"And do no mischief on the earth after it has been (created) well. Pray to Him with fear and expectation. Indeed, the mercy of Allah is very close to the one who does good" (Al-A'raf[7]: 56).

This verse clarifies that man is not allowed to destroy the created earth and must take care of nature. This is also related to the principle of responsibility taught in Islam (Ratnasari & Chodijah, 2020). In this case, the responsibility lies in managing natural resources to meet economic needs and maintaining and preserving nature and the natural resources contained therein. Industrial activities that constantly exploit nature are, of course, prohibited and violate the responsibilities taught in Islam. Nature that Allah Almighty has created as a blessing that should be maintained because it has met human needs is not even used arbitrarily for human satisfaction and greed.

All human economic activities and other activities must also comply with the maqasid of sharia. Sharia maqasid is the values and principles that must be implemented and fulfilled to create benefits (Suardi, 2021). This principle consists of the maintenance of religion, the maintenance of the soul, the maintenance of reason, the maintenance of property, and the maintenance of offspring. This principle must be fulfilled to create a good balance and benefits,

When viewed from the perspective of Islamic economics, carbon trading will undoubtedly be exciting. Carbon trading systems and mechanisms are still relatively new and have not only economic impacts but also environmental responsibility. If examined more deeply, carbon trading is by Islamic economic regulations. In terms of benefits, carbon trading has had many economic impacts, as well as the development of regional potential and its communities. This happens because carbon trading empowers forest communities to carry out forest management projects they have known for a long time

and carry out various positive activities such as tree planting, fish farming, craft making, and many others without damaging the surrounding environment. In addition, in terms of environmental conservation, of course, carbon trading has a significant impact.

Good and fertile forests are needed to absorb carbon emissions in carbon trading activities, which will later be traded. Of course, forests are a significant asset in this activity. Actors or companies in this context must care for and maintain their forests and often even plant trees regularly, which will undoubtedly benefit the environment. Furthermore, if analyzed based on sharia maqasid, carbon trading also fulfills this principle.

1. Protection of Religion (*ad-din*)

The protection and maintenance of religion are the main objectives of Muslims. In carbon trading, this activity is a step and effort to reduce the effects of greenhouse gases that occur globally while opening and providing jobs for the surrounding community. Islam puts work as worship to meet personal needs. Islam has placed three roles for man on earth (Langsa, 2022).

a. As Enforcer of Ihsan and Justice

Allah says in the Qur'an Surah An-Nahl verse 90 which means:

"Verily Allah commands (you) to do justice and do good, to give help to relatives, and He forbids (to do) evil deeds, evil, and enmity. He teaches you so that you can learn lessons." (An Nahl[16]: 90)

This verse shows that excessive use of natural resources and production waste that can damage the earth is a disaster. This, of course, contradicts the principles of Ihsan and justice in environmental management. Carbon trading is an effort to reduce waste that will damage the environment. So, carbon trading has fulfilled the principles of ihsan and justice.

b. Become God's representative (caliph) on Earth

Earth does not belong to humans but is entrusted by the creator to be well guarded. Man has been given the mandate to become a caliph on earth. As Allah says in the Qur'an Surah Az-Zumar verse 10 which means:

"Say (Prophet Muhammad), 'O My servants who believe, fear your Lord.' Those who do good in this world will gain good. The earth of God is vast" (QS Az Zumar: 10)

According to this proposition, humans are forbidden to mistreat nature. Nature's destructive behavior, of course, will be accounted for in the future. Therefore, through carbon trading, humans have sought to become caliphs as demanded to protect the earth.

c. Prospering the Earth

The Caliph, if examined again, will lead to the earth's prosperity. With this task, humans must avoid and keep away from earth-destructive behavior. As in the Qur'an Surah Al-Araf verse 56, which means:

"Do not do mischief on the earth after it has been properly arranged. Pray to Him with fear and expectation. Verily the mercy of God is very close to those who do good." (Al-A'raf[7]: 56)

This verse is an excellent prohibition from God to man not to destroy the earth. The destroyer of the world will not be honored by Allah and will not be rewarded in the Hereafter for humans who are greedy and tyrannical to nature.

2. Protection of Life (*an-naafs*)

Environmental care is a form of care and care for the soul. It is undeniable that humans cannot live without the earth and its environment. Therefore, the more damaged the world eats, the more damaged human life will be. Carbon trading is a step to minimize

damage to the planet and sustainably improve ecosystems. Environmental care for the soul also becomes interrelated because a damaged environment can cause various diseases for living things on earth.

3. Protection of Intellect (*al-aql*)

The reason is a differentiator for humans and other creatures. The intellect makes man able to think and distinguish between good and evil. In carbon trading, the community will have a positive impact through various nature empowerment and conservation activities, which will undoubtedly change the community's mindset to continue to protect the surrounding nature through carbon trading activities that bring economic benefits as well.

4. Protection of Property (*al-mal*)

Possessions are essential and need to be fulfilled by humans. Therefore, various economic activities must be undertaken to meet these needs. The preservation of wealth through carbon trading is seen through multiple community empowerment activities that generate financial income for people who work as employees or participate in managing forests. In addition, various activities that do not emit carbon emissions, such as making handicrafts made from nature and forests, will bring selling value to these products.

5. Protect of lineage (*an-nasal*)

Maintaining and caring for the offspring in question will make our children and grandchildren a wise and positive generation in managing and utilizing natural resources. Through carbon trading, we can introduce conservation projects to the next generation while bequeathing nature and the environment with all the natural resources contained therein to continue its management so that it does not become extinct and continues to be sustainable.

CONCLUSION

Carbon trading is a solutive and innovative step to reduce the effects of greenhouse gases due to carbon emissions from various human economic activities. Through diverse local cultures, the Dayak Tribe certainly provides a green light and encouragement so that carbon trading can survive and continue. The orientation of nature protection in carbon trading is, of course, to the culture of the Dayak Tribe, which highly respects nature. These elements will be a synergy to build a sustainable economy.

Islamic economics also finds it attractive to trade in carbon. This activity provides many benefits for nature and the living things on this planet. Based on analysis through the benefits and maqasid of sharia, carbon trading has fulfilled various principles in Islam and Islamic economics. Of course, this effort can be an alternative business for everyone who wants economic benefits while preserving the environment. Carbon trading will undoubtedly bring rewards because work is considered worship, and environmental preservation should be maintained. Through carbon trading, it is expected to be an effort to overcome various environmental issues and encourage economic growth, which will ultimately lead to a good economy for the country.

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