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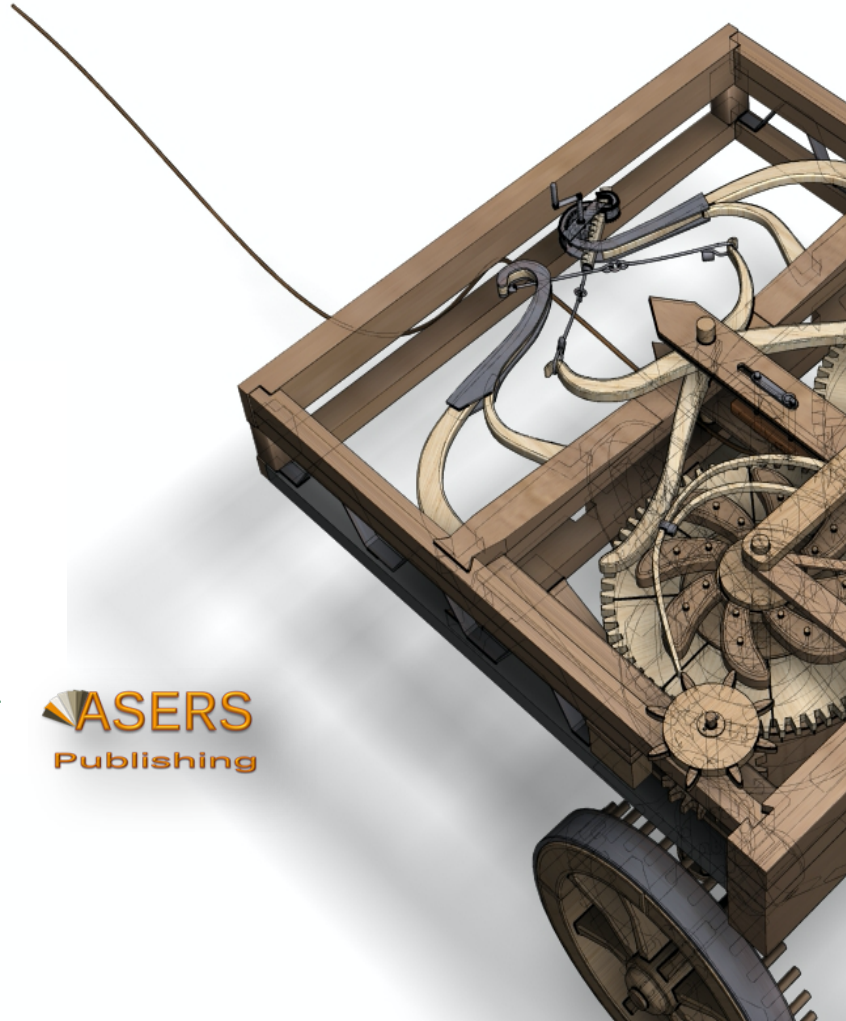
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The Cosmology of Tana Toa: Local Knowledge, Traditions, and Experiences of Forest Preservation in South Sulawesi, Indonesia

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Abstract:

The study aims to explore the traditions of the Kajang people in nature/forest management based on their local knowledge and experience. In specific, this research describes the concept of cosmology of the Kajang tribe and the nature management system based on the prevalent social system in the Kajang tribe community. The research methods used in the study were interviews, observations, and documentation. Key leaders in the Kajang tribe community were the primary sources in this research. The collected data were analyzed and validated through focused group discussion sessions, discussions with peers, and discussions with experts. In this study, it was discovered that the Kajang people believe that nature comes from God and sent someone from the sky to lead the Kajang people with the aim of protecting and preserving nature. Pasang Ri Kajang is a spiritual message passed down through oral tradition to preserve nature in the Kajang community system.

Keywords: Tana Toa; tradition; experiences; local knowledge.

JEL Classification: D83; Q23; Q33; R11.

Introduction

Environmental issues are a global issue stemming from the over exploitation of natural resources for the production of goods that result in the destruction of nature. Among the natural damage that disrupts the ecosystem of life caused by the above activities is global warming (Thomas 2015), depletion of water sources, air pollution, forest loss, destruction of biodiversity (flora and fauna), extreme weather and climate change (Zommers 2016), and poverty (Panayotou 1994). Environmental destruction is caused by unstable production, distribution and consumption activities in the economic sphere. Limited natural resources, coupled with unlimited human wants are the beginning of environmental destruction. Therefore, an ethic is needed to build environmental awareness, and the highest ethic is tradition/religion. Spiritual groups, religious traditions, and local religions

(indigenous traditions) are considered capable of providing inspiration to build a deeper relationship with nature for the sustainable development of humanities (Abumoghli 2022).

Basically, every community has a set of systems (values, norms, and rules) that regulate the relations between humans and nature. The system is formed through the strong influence of the surrounding environment; geography, climate, social relations, and tradition (religion). For traditional communities, nature is a source of life that must be maintained in equilibrium, a source of life, and part of the manifestation of human spiritual relations with God. The local wisdom of traditional communities aims to maintain the adequacy of the needs of community members and maintain a proper survival in the community. The dependency of traditional communities on nature is not only material, but also includes moral and spiritual aspects. Traditional indigenous peoples in Indonesia recognize that nature is an active subject that works, responds, and dialogues with every behaviour given to it. The dialogical model then crystallized into an ethical/spiritual system that bound the behaviour of community members (Salahuddin 2005).

Indonesia, with its thousands of indigenous communities, has values, systems and rules that bind its community members, both in relation to themselves, others and nature. Some indigenous tribes that exist to maintain a strict customary system in regulating their natural forest resources (territorial area) are the Kajang Tribe (South Sulawesi), Badui Tribe (West Java), Tengger Tribe (East Java), Dayak Dalam Tribe (Kalimantan), Tanah Toraja Tribe (South Sulawesi), Tobare Tribe (South Sulawesi), Sambori Tribe (Sumbawa), Sasak Tribe (Lombok), and several other tribes. In some of these tribes, forest conservation was integrated with national development programs (tourism, education, plantations, and livestock), while others are still managed by indigenous peoples themselves without any government intervention.

In this context, there is a dialog between indigenous peoples and the government in the development of the forest industry; the government prioritizes aspects of modernity while indigenous peoples stick to traditional aspects by maintaining the traditions and values of their ancestors with a strict value system. As a result, almost all forests in Indonesia are known as 'customary forests', which are the territorial areas of indigenous peoples that cannot be intervened by the government, only managed and developed by indigenous peoples in accordance with ancestral values. The article specifically discusses the traditions, values and systems that govern the relations of the Kajang people in the management and preservation of their territorial forests.

1. Literature Review

The ecological consciousness of the global community has shifted following the massive destruction of nature in several parts of the world. Floods, landslides, forest fires, and other disasters are claimed to be human failures in managing the earth. Nature as a system that is interconnected with each other, or even outside itself interacts actively which shapes a unique relationship pattern in the whole of the ecological system (Muadz 2016, Rois and Salahuddin 2021, Yawson 2013). Even some experts claim that the socio-economic disasters are caused by human failure in maintaining environmental balance. This is where the cosmological perspective in ecological studies is important, combining the management of the micro cosmos and macro cosmos in the governance of the meta cosmos. Or involving spiritual-ethic elements in the human being for the governance of humanity's historical space and time.

Cosmology and environmental studies are two fields of research related to the understanding of the universe and our place within it. Some important points in cosmology and environmental studies in several references are as follows:

- cosmology studies the origin and development of the universe. This study includes topics such as the speed of expansion of the universe, the distribution of matter, and the dark nature of matter and energy (Peacock 1999, Peebles 1993).
- environment studies the interactions between organisms and their environment. It covers topics such as climate change, habitat destruction and wildlife conservation (Chapin *et al.* 2010, Ching Chen *et al.* 2011).
- the study of cosmology and the environment can provide insight into how the universe and the earth's environment interact, as well as the possible impacts of human activities (Folke 2006, Carpio *et al.* 2011).
- a better understanding of cosmology and the environment can help in developing solutions to address environmental issues, such as climate change, land degradation and water quality depletion (Kinsley 1995, Smith 2018, Tucker and Grim 2001).
- the study of cosmology can help us understand the universe and our place in within it, while environmental studies can help us understand how to maintain our planet as a livable place for all living species.
- cosmology and environmental studies are multidisciplinary fields involving physics, biology, chemistry, and other disciplines (Buchler and Carrillo 2019, Evanoff 2005, Ford *et al.* 2020, Nasr 1994).

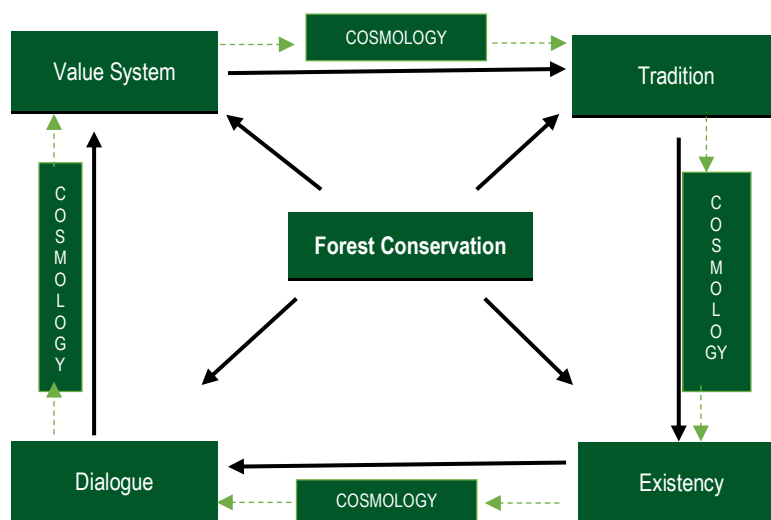
▪ cosmology and environmental studies can provide insights into how the universe and our planet can continue to survive in the long term and how humans can contribute to the sustainability of our planet (Chapin *et al.* 2010, Nasr 1994, Nesteruk 2011).

All humans have a contribution and responsibility for the sustainability of nature/earth. Therefore, religions and traditions that are believed by humans teach how humans should be wise and interact with the environment to maintain the balance of nature (Buchler and Carrillo 2019, Liu Y. and Chen 2019, Sarkar 2018, Smith 2018). In the study of tradition and religion, the universe is God's creation whose preservation is the responsibility of humans at the micro level (environment). Associating environmental management based on the macro cosmos and the spirit of divinity will bring a new vision and paradigm in the management of nature (Keller 2017). Although many scientists argue that religion (spiritual perspective) and cosmology (scientific perspective) contradict each other in the creation of nature, there are some common points that mutually influenced and reinforced that the universe runs in a system, and humans are the main element in maintaining the sustainability and continuity of the universe system.

The lack of spiritual elements in people's lives has an impact on the management of nature, which always refers to the fulfilment of material needs. The orientation of development planning and policy is always pursuing economic growth rates (Evanoff 2005). Communities, private companies and the government all contribute to the destruction of natural ecosystems (sea, land and air). The system of thinking and behaviour of society has been set up in the realm of materialism-hedonism. One of the things that damage the nature is the mistake of the thinking system that continues to be voiced in the public domain with scientific approaches and truths, and ignores the spiritual truths that are felt and believed in by local religions and traditions. The destruction of the environment today can only be restored through a spiritual-religious approach. (Nasr 1994).

Based on the conceptual theoretical discussion above, for the purpose of this research, a frame of thought is organized as shown in the Figure 1.

Figure 1. Research thinking scheme



2. Research Methodology

The study is ethnographic research that explores the deepest values of the Kajang people's beliefs related to the cosmos, God, and their behavior towards nature. The research used methods of observation, interview, and documentation. Observations were made by observing the behavior, social relations, and daily activities of the Kajang people. Interviews were conducted with key figures in the Kajang indigenous community. Documentation was used to map the Kajang community in the South Sulawesi government area. Analysis was carried out since data collection by comparing existing materials, both through observation, interviews, and documentation. The analysis process was also confirmed through focused group discussions, peer discussions, discussions with experts, and data triangulation. With the above process, the validity of the data can be tested and evaluated.

3. Result and Discussion

3.1. The Kajang Tribe

The Kajang tribe is geographically located in Kajang sub-district, Bulukumba district, South Sulawesi with an area of 129.06 km². Kajang sub-district consists of 19 villages, and only 8 villages are covered by the Kajang

customary system (BPS Bulukumba 2022). The area of the Kajang clan is 729 hectares consisting of residential areas, agriculture, trade, and other public facilities (village halls, places of worship, and tombs). Kajang is also known as *tana toa* (old land) which is governed by an *ammatoa* (tribal chief). Basically, Kajang is one whole area under one customary system. Due to development reasons in Indonesia, the Kajang tribe's territory is divided into the inner Kajang (Kajang Dalam) and the outer Kajang (Kajang Luar). Kajang Luar is an area which is allowed to come into contact with modernity and change, while Kajang Dalam is a closed area that maintains the traditions and teachings of the ancestors. In the Kajang Dalam area, there are no schools, hospitals, places of worship, and other public facilities built. (*Observation and interview*). There are no televisions, phones, radios, and other electronic devices in the houses of the Kajang Dalam tribe (*observation and interview*).

The division of the Kajang region is the result of a dialog between traditionalism and modernism. Kajang divides its territory without losing its identity and existence as Kajang community. Kajang Dalam is the existence of traditionalism with a local knowledge system that is wise in responding to life; balancing nature and humans in the limited natural resources. Based on this the Bulukumba administration formally recognized the existence of the Kajang indigenous people through the Regent Decree No. 9 of 2015. Kajang is a cultural treasure of ancestral heritage that must be protected, preserved and confirmed as an intellectual asset of the archipelago (Rusanti *et al.* 2021).

Formally, the Kajang people are Muslims and Hindus. But in their daily spiritual practice, they believe in the religion of their ancestors; *patuntung*. For the Kajang people, the norms taught by their ancestors are more important than their formal religion, and the main values taught are recognition of the Almighty God (Tau Rie' a'ra'na; something that cannot be described), recognition of the old land (Tana Toa), and submission to the tribal leader (Ammatoa). Religious norms in the Kajang community are taught from generation to generation through oral tradition. What is taught in the ancestral religion is simplicity and peace (Tallasa Kamase-Mase) that will lead to a meeting with God. The symbol of simplicity and peace in the Kajang community is the color black. Everyone dresses in black, with more or less the same style and model. Including the Ammatoa wearing the same clothes as the community. Community houses are also built uniformly, from natural materials of the Kajang forest, and built together by community members. There is almost no competition within the community, and it flows naturally under the 'guidance' of Pasang Ri Kajang. The tasks and functions that distinguish them, and the differences between them in the community are to support each other's lives without exploitation. Togetherness and mutual cooperation are the indigenous traits of the archipelago based on the tradition of ancestral values (Sabri and Salahuddin 2022).

This ancestral religion is taught through oral tradition from one generation to another known as Pasang Ri Kajang (message from Kajang), which is a set of values and norms that continue to be passed on within the community (Ichwan *et al.* 2021). Pasang ri Kajang is something that must be obeyed, which has the same value as revelation for followers of the religion of heaven (Hijjang 2017). The main value of Pasang Ri Kajang is the recognition of a mighty God who provides forests for humans (Amin 2019). Through Pasang Ri Kajang, the character of the community is naturally transformed into a group of people who are well-mannered, peaceful, and full of love (Ichwan *et al.* 2021). Ammatoa as a central figure is a mirror of the community he leads. Ammatoa's exemplary, honesty, and consistency in maintaining and preserving traditions are the keys to successful management of the Kajang tribe's leadership (Hijjang 2017).

Ammatoa is the central figure for the Kajang people. As well as being a community leader, the ammatoa's main duty is as a spiritual leader. He is believed to be the 'bridge' between man and God. Therefore, ammatoa is a 'position' that is directly given by God to a Kajang tribe community member. The appointment of the ammatoa is not based on hereditary hierarchy or deliberation (democracy), but on direct appointment from God (interview). There is a natural sign given by God to the community to determine their leader (ammatoa). Ammatoa must fulfill the elements of inner attachment to God, nature, and the previous ammatoa. These three elements are the realm of the Kajang cosmos (spiritual) in forest management.

3.2. Pasang Ri Kajang: The Spirit of the Forest Conservation

The Kajang people believe that the forest is a God-given (tau rie' a'ra'na), who then sent humans to preserve it (tau manurung; people who descended from the sky) in the Kajang forest, and this tau manurung was the first ammatoa (leader) of the Kajang people. The Kajang people believe that the first humans came from the Kajang forest, and the place where humans descended is identified as a sacred forest by the Kajang people. For the Kajang people, the forest is a transcendental spiritual relationship between humans and God. Accountability for forest management is a spiritual responsibility that is entrusted to the ammatoa. Ammatoa himself is a leader by God's will, a person trusted by God to lead the community in accordance with God's wishes (interview). Through

the natural signs given by God, the Kajang people identify and establish their tribal leader (ammatoa). For the Kajang people, the forest is a 'spiritual magnetic field' that connects people to the God. This is the essence of patuntung; the religion of the local Kajang people. The forest is life; destroying the forest means destroying life. This is the spiritual cosmological reality in religion, the forest as the pivot of spiritual relationship with God.

To maintain the sustainability of life, the Kajang tribe divides the forest area into three parts, namely; sacred forest (Borong Karamaka), border forest (Borong Batasayya), and community forest (Borong Luara'). The sacred forest is a special area of worship to God (ancestors), a sacred area, only certain people from the Kajang tribe members can enter it, or people who are permitted by the tribal chief. In the sacred forest area, only ritual activities of worship are allowed; respect to the ancestors. Border forest is a production forest area where the quality and quantity are under the supervision of the ammatoa. The processing of forest production is regulated by the ammatoa according to the availability and balance in the forest. If the ammatoa prohibits production activities in the border forest area, then all members of the Kajang community obey the ammatoa's prohibition. All commands, prohibitions and recommendations of ammatoa in forest management are the result of communication with God that must be implemented by all community members. For community members who disobey will be punished according to the size of the fraudulent acts taken in forest products. Community forest is a forest area whose entire content is to fulfill the needs of clothing, food and shelter of community members.

There are 10 ammatoa messages that related to the preservation of the forest, as the results of the interview, and also documented by Surtikanti as follows (Surtikanti *et al.* 2017) :

- Jagai linoa lollong bonenakamayya tompo langika siagang rupa taua siagang boronga (Maintaining the earth and its contents, the sky, people, and forests);
- Nikasi pa liangi ammanra'-manrakia borong (don't destroy the forest);
- Anjo boronga iya kontaki bosiya nasaba konre mae pangairangnga iaminjo boronga nikua pangairang (The forest is the source of rain, because if there is no forest, there is no water);
- Punna nitabbangngi kajua riborongna, nunipappi inrangngi (If a tree in the forest is removed you must replace it);
- Narie' kaloro battu riborongnga, narie' timbusu battu rijakua na battu ri kalelengnga (The river exists because of the forest, emerging from the stones and the creeping plants);
- Boronga pangallui nitallasi, erea battu ri kaloro lupayya (Forests need to be revived, rivers from flowing springs);
- Iyamintu akkiyo bosu anggenna erea nipake a'lamung pare, ba'do appa'rie' timbusia anjo (Rainwater was used by the community to grow paddies. Ba'do trees (lush forests) are the reservoir of spring water);
- Tugasa'na Ammatoa nolarangngi annabbang kaju ri borongnga (Ammatoa's job is to prevent people from logging trees in the forest);
- Iyaminjo nikua ada'tana Iyaminjo boronga kunne pusaka Talakullei nisambeij kajua, iyato' minjo kaju timboa (That is what is meant by adat or ethics in treating the land, the forest as an heirloom that cannot be replaced it trees, including trees that are currently growing sprouts);
- Talakullei nitambai nanikurangi borong karama, nilarangngi tauwa a'lamung-lamung riborongnga, nasaba se're hattu larie' tau angngakui bate lamunna (Sacred forests cannot be reduced and added to, people are forbidden to plant in the forest, because there is a time when people will recognize the plants they plant).

The whole message is composed in the context of obedience to the God based on the beliefs of the local Patuntung community. Basically, the message conveyed is in the context of the production balance, the sustainability of natural resources, simplicity, and the forest is a shared responsibility under the coordination of ammatoa. Ammatoa is a protector, caregiver, and role model for the Kajang tribe community, which technically functions as: 1) an elder (customary leader), 2) a human connector with Tu Rie a'ra'na (God), 3) a conciliator of conflicts and tensions between community groups, 4) responsible for forest preservation, in accordance with the Pasang ri Kajang.

3.3. The Cosmology of Kajang: Sustain and Change

Patuntung is one of the local religions in South Sulawesi that is based on the community's knowledge of cosmology, namely the relationship between humans and God, and humans and nature. Human existence will only be sustainable if natural resource management is linked to spiritual-transcendental values that bound people's behavior in a natural-ethical manner (Aziz *et al.* 2021). This spiritual ethic guides the production behavior of the Kajang people in the concept of togetherness, mutual cooperation, simplicity, peace and love. With the above pattern, there is no competition among community members because natural resources are owned together, managed together, and utilized together for mutual welfare (Rois and Salahuddin 2022). The Kajang

people's concept of life is identical with socialism in its primitive form, and thus it confronts the concept of capitalistic developmentalism.

Developmentalism requires a change in paradigm, mindset, behavior, and tradition. People who do not want to change are claimed to be traditional and under-developed, while people who want to change are recognized as modern and progressive. This is where the Kajang people are pushed into the mainstream of development. However, the main principles of developmentalism are:

- the need for the acquisition of capital that refers to industrialization, technology, and trade;
- cultural change and modernization;
- creating institutional bases and development initiatives.

The exploitative-hedonist model of developmentalism is certainly contrary to the Kajang tribe's principle of life, which is based on simplicity and mutual cooperation. Developmentalism based on materialism is also very contrary to the principles of the Kajang tribe which is based on spiritualism.

In the context above, the local wisdom of the Kajang tribe divides territories into open and closed areas. The choice is to make peace with reality. Despite being in contact with the modern world, the people of Kajang Luar (open territory) still believe in ancestral religion and are morally-spiritually bound to Tana Toa (Ichwan *et al.* 2021, Sampean 2017). They still communicate to their descendants about Tana Toa (ancestral land) and the importance of forests for life both in the family education, community activities, and educational institutions. (Suparyanto dan Rosad 2020, Surtikanti *et al.* 2017). This means that although it has become an open area, the people of Kajang Luar are still bound in the realm of their ancestral spiritual cosmology. Kajang's mystical-spiritual identity is still closely embedded in themselves.

The presence of tourism that develops eco-tourism and cultural tourism, making Kajang as an object as well as a subject in development. As with other regions in Indonesia, the development of tourist areas always left conflicts, which were also accompanied by dialog and bargaining position process (Salahuddin and Abdillah 2022). Tourism, with all the advantages and disadvantages that exist in it is a gate to introduce Kajang as science, culture, tradition, and spirituality of the archipelago. The knowledge and practice of forest conservation in the Kajang tribe is a model of sustainable development that prioritizes balance by relying on the power of an intact micro-cosmos.

The failure of developmentalism is its inability to engage with the deepest aspects of human beings; and more based on positivistic logic. The Kajang tribal community with all the potential and power around it presents knowledge and operational concepts that are intact for human welfare as a whole, not individuals. Ideally, the presence of science does not replace the wisdom, and good science is the science that is based on wisdom (spirituality). The spirituality of the Kajang people should be a model for forest/nature sustainability and human sustainability.

Conclusion

The Kajang people live in traditions and beliefs that recognized that nature is a source of life that must be managed in accordance with God's will. The Kajang people acknowledge that the origin of humans and the whole of nature is from Tana Toa located in the sacred forest area, a sacred place for the Kajang people. Amatoa as a leader chosen by God in the tradition of the Kajang people is required to harmonize the needs of the community with the availability of Kajang's natural resources. The alignment was based on the spiritual ethics that were orally narrated in Pasang ri Kajang. With the spiritual ethics approach assembled in a strict tradition system, the Kajang community maintains their natural resources for their survival independently.

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References:

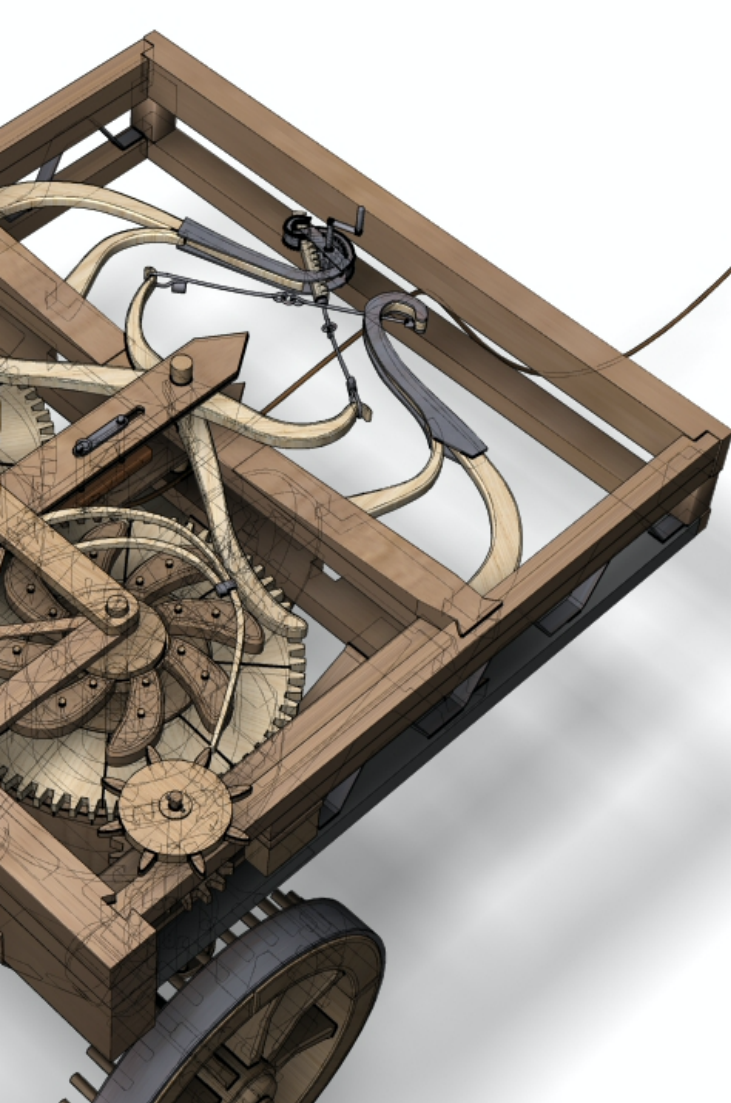
- [1] Abumoghli, I. 2022. Religion and the environment. In *Reimagining the human-environment relationship*. Available at: http://collections.unu.edu/eserv/UNU:8838/UNUJUNEP_Abumoghli_RHER.pdf
- [2] Amin, S. J. 2019. Talassa Kamase-Mase and Zuhud: The meeting point of closeness to god in the frame of Pasang Ri Kajang and the study of Tasawwuf. *Kuriositas*, 12(1): 61–75.
- [3] Aziz, A. A., Salahuddin, M., and Muntafi, M. S. 2021. Religiosity and mental health outcomes among Indonesian Moslems: Evidence for different age groups. *Mental Health, Religion & Culture*, 25(1): 1-18.

DOI:<https://doi.org/10.1080/13674676.2021.2007228>

- [4] Buchler, I. R., and Carrillo, R. 2019. Indigenous cosmologies and environmental ethics: The interface of sacred and natural. *Journal of Agricultural and Environmental Ethics*, 32(1): 51–68. DOI:<https://doi.org/https://doi.org/10.1007/s10806-018-9743-x>
- [5] Carpio, J. G., *et al.* 2011. Multiwavelength observations of massive molecular gas around the interacting system NGC 6240. *The Astrophysical Journal*, 728(1): 15.
- [6] Chapin, F. S., *et al.* 2010. Ecosystem stewardship: Sustainability strategies for a rapidly changing planet. *Trends in Ecology & Evolution*, 25(4): 241–249. DOI: <https://doi.org/10.1016/j.tree.2009.10.008>
- [7] Ching Chen, I., *et al.* 2011. Rapid range shifts of species associated with high levels of climate warming. *Science* 333(6045): 1024–1026. DOI: <https://doi.org/10.1126/science.1206432>
- [8] Evanoff, R. 2005. Reconciling self, society, and nature in environmental ethics. *Capitalism, Nature, Socialism*, 16(3): 107–114. DOI: <https://doi.org/10.1080/10455750500208839>
- [9] Folke, C. 2006. Resilience: The emergence of a perspective for social–ecological systems analyses. *Global Environmental Change*, 16(3): 253–267. DOI: <https://doi.org/10.1016/j.gloenvcha.2006.04.002>
- [10] Ford, J. D., *et al.* 2020. The resilience of indigenous peoples to environmental change. *One Earth*, 2(6): 532–543. DOI: <https://doi.org/10.1016/j.oneear.2020.05.014>
- [11] Hijjang, P. 2017. Pasang and traditional leadership ammatoa indigenous communities in forest resources management. *Advances in Social Science, Education and Humanities Research*, 84: 365–369. DOI:<https://doi.org/10.2991/iconeg-16.2017.81>
- [12] Ichwan, M., *et al.* 2021. Pasang ri Kajang: oral tradition of Ammatoa Kajang indigenous people in conservation character building. *Ideas: Jurnal Pendidikan, Sosial, Dan Budaya*, 7(4): 133. DOI:<https://doi.org/10.32884/ideas.v7i4.495>
- [13] Keller, C. 2017. The anthropocene and the environmental crisis in cosmological context. *Journal for the Study of Religion, Nature and Culture*, 11(2): 119–131. DOI: <https://doi.org/10.1558/jsnc.34783>
- [14] Kinsley, D. 1995. *Ecology and religion: Ecological spirituality in cross-cultural perspective*. Prentice-Hall. ISBN: 0131385127, 978-0131385122, 248 pp.
- [15] Liu, Y., and Chen, Y. 2019. Taoist cosmology and environmental ethics. *Journal of Agricultural and Environmental Ethics*, 32(3): 405–419. DOI: <https://doi.org/https://doi.org/10.1007/s10806-019-09788-1>
- [16] Muadz, M. H. 2016. *Anatomy of social system a reconstruction system reason based*. Institut Pembelajaran Gelar Hidup. DOI: <https://doi.org/978-6028-4328-8-7>
- [17] Nasr, S. H. 1994. Islam and the environmental crisis. *The Islamic Quaterly*, XXXIV(4): 217–234.
- [18] Nesteruk, A. V. 2011. Cosmology at the crossroads of natural and human sciences : Is demarcation possible? Part 2 . *Journal of Siberian Federal University - Humanities and Social Sciences*, 4(5): 644–666. Available at: https://puretest.port.ac.uk/ws/portalfiles/portal/162623/Nesteruk_sib2_final.pdf
- [19] Panayotou, T. 1994. Economic instruments for environmental management and sustainable development. *United Nations Environment Programme's Consultative Expert Group Meeting*, 1–72. http://classwebs.spea.indiana.edu/kenricha/Classes/V600/Spring2009ClassReadings/Frameworks/panyouto_econ_instru.pdf
- [20] Peacock, J. A. 1999. *Cosmological physics*. Cambridge University Press. ISBN: 978-0511804533, DOI:<https://doi.org/10.1017/CBO9780511804533>
- [21] Peebles, P. J. 1993. *Principles of physical cosmology*. Princeton University Press. ISBN: 978-0691209814, 774 pp.
- [22] Rois, I., and Salahuddin, M. 2021. DSN-MUI economic Fatwa in Indonesia's socio-economic system (Maqashid Shariah Analysis System Approach). *Istinbâth Jurnal Hukum Dan Ekonomi Islam*, 20(1): 91–106.
- [23] Rusanti, E., Sofyan, A. S., Syarifuddin, S., and Akramunnas, A. 2021. The indigenous ecotourism in Kajang South Sulawesi: Empowerment issues in the context of Pa'pasang Ri Kajang. *Religious: Jurnal Studi Agama-*

- Agama Dan Lintas Budaya*, 5(2): 321–336. DOI: <https://doi.org/10.15575/rjsalb.v5i2.11661>
- [24] Sabri, M., and Salahuddin, M. 2022. Freedom of religion and religious relations (Construction of Sukarno's Thought). *Pancasila: Jurnal Keindonesiaan*, 2(2). DOI: <https://doi.org/https://doi.org/10.52738/pjk.v2i2.119>
- [25] Salahuddin, M. 2005. Shar'iyah court in sultancy of Bima: The legal dialectic between islam and tradition. *Ulumuna*, Volume IX, 4(51): 189–201. DOI: <https://doi.org/10.20414/ujs.v9i1.451>
- [26] Salahuddin, M., and Abdillah. 2022. Maqashid al-Shariah, social dialogue, and tourism development in Lombok. *Journal of Environmental Management and Tourism*, Volume XIII, Winter, 8(64): 2213–2221. DOI:[https://doi.org/10.14505/jemt.v13.8\(64\).13](https://doi.org/10.14505/jemt.v13.8(64).13)
- [27] Sampean, S. 2017. Survival etnik :Kuasa kosmologi dan posisi etnik Kajang Ammatoa Dalam Pembangunan. *Journal of Islamic World and Politics*, 1(1). DOI: <https://doi.org/10.18196/jiwp.1108>
- [28] Sarkar, S. 2018. Hindu cosmology and environmental ethics: An exploration. *Journal of Agricultural and Environmental Ethics*, 31(6): 743–755. DOI: <https://doi.org/https://doi.org/10.1007/s10806-018-9722-2>
- [29] Smith, J. 2018. The role of religion and culture in environmental sustainability: A case study of indigenous peoples in Australia. *Environmental Ethics*, 40(3): 289–307
- [30] Suparyanto dan Rosad. 2020. The meaning of forests for the Kajang indigenous people, a local wisdom in environmental conservation. *Etnoreflika*, 2(1): 150–160.
- [31] Surtikanti, H. K., Syulasma, A., and Ramdhani, N. 2017. Traditional knowledge of local wisdom of Ammatoa Kajang Tribe (South Sulawesi) about environmental conservation. *Journal of Physics: Conference Series*, 895(1): 1–9. DOI: <https://doi.org/10.1088/1742-6596/895/1/012122>
- [32] Thomas, V. R. L. 2015. *Global increase in climate-related disasters*. In ADB Economics Working Paper Series, No. 466. Available at: <https://www.adb.org/sites/default/files/publication/176899/ewp-466.pdf>
- [33] Tucker, M. E. Velyn, and Grim, J.A. 2001. Introduction: The emerging alliance world religions and ecology. *Daedalus*, 130(4): 1-22. Available at: <https://www.jstor.org/stable/20027715>
- [34] Yawson, R. M. 2013. Systems theory and thinking as a foundational theory in human resource development- A myth or reality? *Human Resource Development Review*, 12(1): 53–85. DOI:<https://doi.org/10.1177/1534484312461634>
- [35] Zommers, Z., Van Der Geest, K., De Sherbinin, A., Kienberger, S., Roberts, E., Sitati, A., James, R. 2016. *Loss and damage: The role of ecosystem services*. UNEP. DOI: <http://collections.unu.edu/view/UNU:5614>
- [36] *** BPS Bulukumba. 2022. *Kajang Subdistrict in Figures 2022*. Badan Pusat Statistik Kabupaten Buukumba.

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