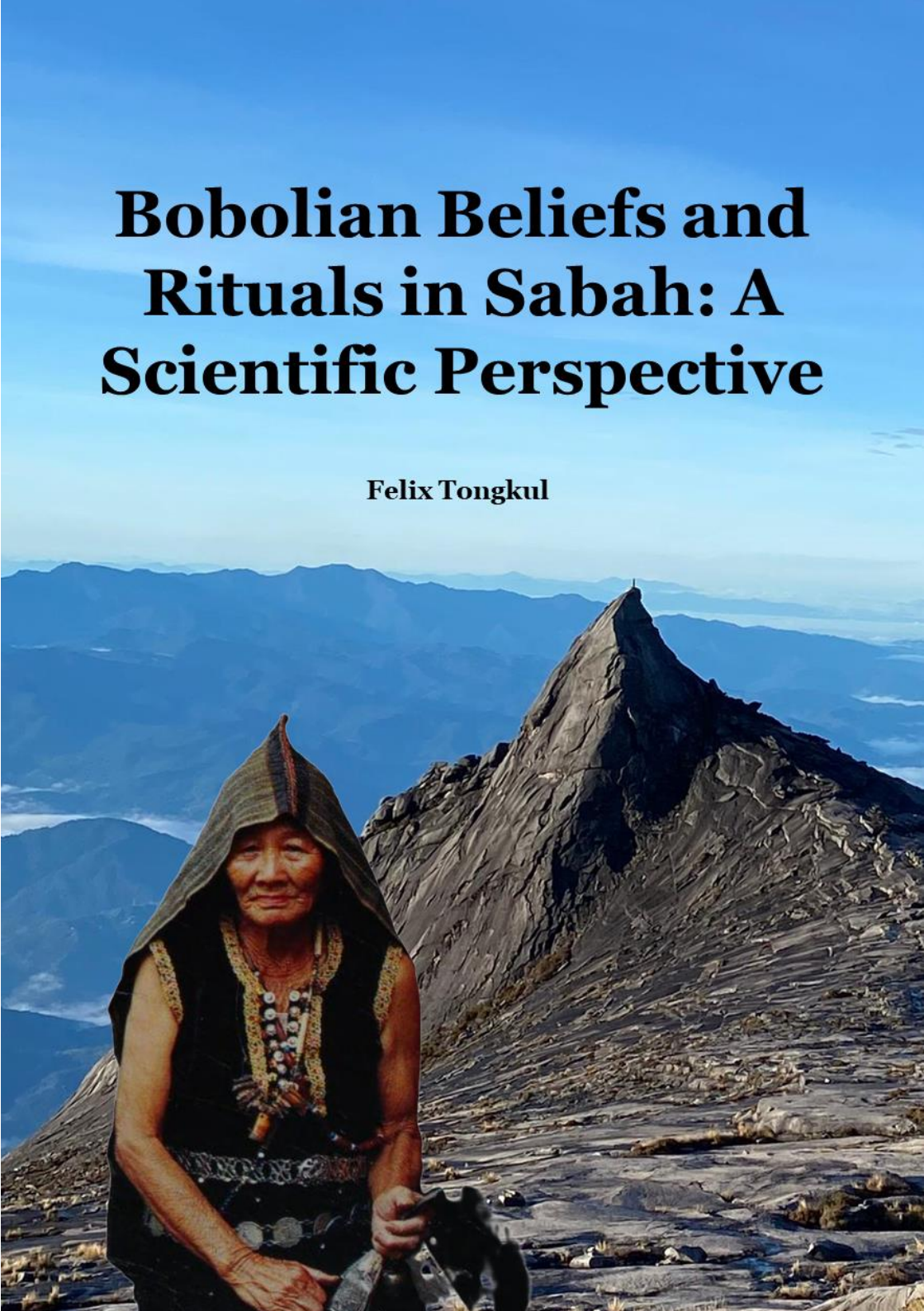
Bobolian Beliefs and Rituals in Sabah: A Scientific Perspective

Felix Tongkul



Cover Photo Credits: *Bobolian* in a traditional attire from Tambunan by Tommy Chang and Peak of Mount Kinabalu by Felix Tongkul (FT)

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Preface

This booklet is the result of a lifelong journey – one that began in a small village in Penampang Sabah where I was exposed to the world of *Bobolian* at a young age. The *Bobolian* stood out not only as healers and spiritual guides, but as interpreters of the natural world, able to sense patterns and meanings where others saw only coincidence. Their knowledge, carried not in books but in chants, dreams, rituals, and lived practice, left a profound impression on me.

Over the years, I have come to recognize that many of the insights embedded in *Bobolian* beliefs and rituals echo the principles found in modern science: geological equilibrium, ecological balance, biodiversity conservation, and the psychosocial aspects of healing. Yet too often, Indigenous wisdom is dismissed as myth or folklore, relegated to the past. This booklet seeks to challenge that dismissal.

Bobolian Beliefs and Rituals in Sabah: A Scientific Perspective is an effort to document, validate, and honor the profound ecological and spiritual knowledge of the *Bobolian* – and to demonstrate its continuing relevance in today's world of climate change, environmental degradation, and social fragmentation. By presenting selected beliefs and rituals alongside scientific explanations, I hope to foster a deeper appreciation of Momolianism as both a cultural and environmental philosophy.

It is my hope that this booklet becomes more than just a publication – that it serves as a bridge between worlds: tradition and science, spirit and matter, memory and future.

Acknowledgement

This booklet would not have been possible without the generosity, wisdom, and trust of many individuals and communities across Sabah. I am deeply indebted to the *Bobolian*s of Penampang, Tambunan, Ranau, Kundasang, Kota Belud, Kiulu, Keningau, and Papar, who opened their hearts to share their stories, rituals, and insights. Their quiet strength and deep respect for life continue to inspire this work.

Special thanks to Dr. Trixie Kinajil, Angelica Suimin, Rita Lasimbang and Jubili Anilik for their thoughtful feedback and encouragement throughout the writing process. Their perspectives helped strengthen the connection between cultural integrity and scientific understanding.

I also thank PACOS Trust for their continued commitment to community empowerment and cultural documentation. Their role in preserving Indigenous knowledge in Sabah has been instrumental.

Lastly, I am grateful to the spirits of the land – the mountains, rivers, trees, and winds – whose presence shaped the beliefs of our ancestors and continue to guide us today. May this work honor their legacy.

How to Read This Booklet

This booklet is divided into ten chapters, beginning with environmental signs observed by *Bobolian*s and ending with a vision for the future. While it can be read sequentially for a full understanding of the *Bobolian* worldview, each chapter also stands on its own.

Whether you are a student exploring Indigenous knowledge systems, a policymaker interested in sustainable development, a cultural advocate, or simply a curious reader – you may start with any chapter that resonates with your interests.

Some may wish to begin with Chapter 3 on Momolianism to understand the spiritual framework. Others might be drawn to the real-life stories in Chapter 5 (Mount Kinabalu Earthquake) or Chapter 6 (Keningau Flash Flood).

Throughout the booklet, you will find connections between traditional beliefs and modern scientific perspectives. This reflects a key aim of the booklet – to show that Indigenous knowledge and science are not opposites, but complementary allies in understanding and sustaining our world.

I encourage readers to approach the content with openness, respect, and reflection – just as the *Bobolian*s have approached the land, the spirits, and their communities for generations.

Chapter 1
Environmental Signs and Knowledge

Reading Nature's Language

For generations, *Bobolian*s and Indigenous communities in Sabah have relied on keen observation of their environment to guide decisions on farming, fishing, healing, and disaster preparedness. Their ability to interpret subtle cues in animal behavior, plant cycles, cloud formations, and other natural elements has formed a sophisticated system of environmental knowledge, long before the advent of modern scientific instruments.

In Ranau, villagers observed frogs leaving their hiding places and birds falling unnaturally silent in the days leading up to the 2015 Mount Kinabalu earthquake. In Kundasang, red ants fleeing their nests have long been interpreted as signs of an impending tremor or landslide. On the coast of Kota Belud, fisherfolk watch the flight patterns of seabirds, the shape of cloud clusters, and wave direction to anticipate storms. In Tambunan and Nabawan, the flowering or leafing of specific trees – such as the *tombung* and *kundai* – are used to mark the beginning of the wet season.

These insights, passed down orally and refined through experience, are known locally as "*Pogigintong do tanak*" (the child's way of seeing) – implying that awareness and humility are needed to truly read the signs of nature.

Bioindicators and Early Warning Systems

What *Bobolian*s and elders once described as intuition or ancestral knowledge is increasingly recognized by scientists as bioindicator-based forecasting. Animals, plants, and even the soil react to changes in their environment – from electromagnetic disturbances and ground pressure shifts to temperature changes and air quality – often well before humans detect anything.

Traditional Observation	Phenomenon Noted	Traditional Interpretation	Scientific Mechanism
Frogs/birds behaving unusually	Before earthquake (Ranau, 2015)	Spirits are disturbed	Sensitivity to electromagnetic fields, low-frequency vibrations
Red ants fleeing nests	Before landslide or tremor	Ground spirits are restless	Response to microseismic activity or ground instability
Seabird flight, cloud formations	Before coastal storm	Sea spirits sending warnings	Changes in wind pressure, barometric shift, meteorological indicators
Tombung tree flowering	Before monsoon season	Wet season approaching	Plant phenology responding to humidity/light/temp cues
Kundai tree leafing	Seasonal shift	Nature's calendar	Indicator species for climatic transition

These observations reveal the convergence between Traditional Ecological Knowledge (TEK) and modern environmental sciences. While science explains the "how" traditional knowledge preserves the "when" and "what to do".

Red ants as bioindicators of subtle ground movements

Rafflesia blooming and Rain Tree flowering indicates wet season

Strengthening Community Preparedness

In the past, such signs prompted immediate community action: rituals, avoidance of river crossings, delayed planting, or reinforcing homes. Today, integrating these traditional observations with formal meteorological and geological data can

greatly enhance community-based early warning systems, especially in rural or high-risk areas with limited access to technology.

For example, combining seismic monitoring with local reports of animal behavior can sharpen the accuracy and timeliness of alerts. This dual approach respects indigenous wisdom while enhancing scientific response.

Reviving a Way of Knowing

Younger generations are encouraged to reconnect with these forms of knowledge – not as outdated superstitions, but as vital environmental intelligence rooted in close, respectful relationships with the land.

As one elder from Tambatuon Kota Belud shared:

"When the ants run uphill and the frogs croak no more – we do not panic. We prepare. Because nature always whispers before it roars."

Closing Thought

Environmental signs are not just data points – they are messages encoded in the rhythm of nature. Through the lens of *Bobolian* knowledge, these signs form part of a larger spiritual and ecological dialogue that reminds us to listen, interpret, and act with humility.

Chapter 2

Who is a *Bobolian*?

Guardians of Spirit, Knowledge, and Land

The *Bobolian* (Dusun term) or *Bobohizan* (Kadazan term) – is far more than a ritual specialist. A *Bobolian* is a spiritual mediator, herbal healer, oral historian, peace negotiator, ecological guardian, and moral compass for the community. In many villages, the *Bobolian* is regarded as a vessel of ancestral memory and a living archive of traditional ecological knowledge.

Their words carry weight not because they dominate, but because they listen: to the spirits, to nature, and to people. They do not seek leadership but are called into it – sometimes reluctantly – through signs, illness, or dreams that refuse to be ignored.

A Calling, not a Career

Becoming a *Bobolian* is never a personal ambition. It is a path revealed through spiritual calling. For many, the journey begins with illness that resists modern treatment or a recurring dream involving ancestral symbols. Others are recognized from childhood for their sensitivity to unseen forces.

The apprenticeship is long and demanding. One must learn the *Rinait* (ritual chants), memorize healing plants, master ceremonial protocols, and understand the laws of *Adat*

(customary governance). But just as importantly, one must cultivate inner discipline: humility, patience, and restraint.

“It is not enough to learn the chants,” said a *Bobolian* from Kampung Kiulu. “You must carry them with dignity. You are not speaking for yourself – you are speaking for the land, for the spirits, and for those who came before you.”

Seven Dusun *Bobolians* from Ranau.
Photo Credit: sayangsabah.com

Women at the Center

While both men and women can become *Bobolian*s, the role has traditionally been held by women in many Kadazan communities, reflecting the matrilineal undertones in certain Dusun cultures. Female *Bobolian*s often specialize in birth rituals, postnatal care, and ancestral healing, while male

*Bobolian*s may be called upon for agricultural ceremonies or conflict mediation.

However, this division is fluid. What matters most is not gender, but spiritual legitimacy – the acceptance of the role by elders, the community, and the spirit realm.

***Bobolian*s from Putatan Penampang – taken around 1920s.**
Photo Credit: Owen Rutter

Rituals Rooted in Ecology and Emotion

*Bobolian*s address a wide spectrum of needs – from healing illness to blessing harvests, from cleansing tainted land to restoring peace in divided families. Their rituals are grounded in the belief that illness and misfortune arise not only from

physical causes but from *Ahasu'* – a disturbance in the natural and spiritual balance.

In Kampung Bundu Tuhan, a *Bobolian* once healed a child suffering from recurring nightmares by placing *komburongo* leaves under the pillow and chanting *rinait* to send the spirit of fear back to the forest. In Ranau, a midwife *Bobolian* performed a seven-step ritual to welcome a newborn, asking the spirits of the land and ancestors to shield the child from harm.

These acts are not superstition. They are encoded forms of psychosocial and ecological healing – addressing trauma, restoring relationships, and reminding communities of their ethical place within the web of life.

Oral Historians and Memory Keepers

Perhaps one of the *Bobolian*'s most critical roles is as a custodian of oral tradition. In some remote villages, they are the only living link to ancestral stories, migration trails, sacred land boundaries, and ancient names of rivers and trees.

They preserve these truths not in books, but in chants and invocations. As Madam Tomunsi Matanul, a *Bobolian* from Penampang shared:

"One only thought of learning until one was very good. If one does not learn it to perfection, it is of no use."

The precision of ritual language is vital – a mispronounced chant, an incorrect offering, or a missed gesture can result in a

failed ritual. This is why *Bobolian*s are both feared and respected – their role straddles the visible and invisible worlds.

Bridging Past, Present, and Future

As communities evolve, so too do *Bobolian*s. Today, some participate in community-based conservation programs, lead heritage workshops, and advocate for indigenous land rights. They are increasingly seen as cultural diplomats – translating ancestral wisdom for modern contexts without losing spiritual depth.

"Our power does not come from wearing beads or chanting in ceremony," said a *Bobolian* from Ranau. "It comes from knowing that everything is connected – the people, the spirits, the land. When we forget this, everything starts to fall apart."

Transition to Chapter 3

Understanding *Bobolian*'s role offers a window into the deeper cosmology that shapes Kadazan-Dusun-Murut life. The *Bobolian* is not just an individual healer but a vessel for Momolianism – the spiritual and ethical system that underpins community relations with nature and the unseen world.

In the next chapter, we explore this belief system in more depth, revealing the principles of balance, reciprocity, and restoration that guide not just rituals – but entire ways of life.

Chapter 3
Understanding Momolianism

The Spiritual Architecture of Life

At the heart of Kadazan-Dusun-Murut worldview lies Momolianism – a living philosophy that governs the relationship between humans, nature, and the spirit world. It is not a religion in the institutional sense, but a holistic system of ethics, cosmology, and ecology woven into daily life. Every ritual, every taboo, every offering stems from this foundation.

Momolianism teaches that all beings – land, water, trees, animals, and humans – possess spirit (*Moinat*). Life depends on maintaining *Osogit*, or balance, between these realms. When this balance is broken (*Ahasu*'), the natural and spiritual worlds respond with *Ohusian* — misfortune or warning signs.

A Framework of Balance and Consequence

The core principle of Momolianism is interconnectedness. Nothing exists in isolation. Every action carries consequence, not just in the physical world but in the spiritual realm as well.

Concept	Meaning	Scientific Parallel	Example
Osogit	Cosmic and ecological balance	Ecosystem stability / homeostasis	Respecting hunting seasons, sacred groves
Ahasu'	Disturbance of balance	Ecological degradation	Deforestation, broken promises, pollution
Ohusian	Misfortune	Feedback loops /	Landslides, illness,

Concept	Meaning	Scientific Parallel	Example
	resulting from imbalance	natural disasters	crop failure
Sogit	Compensation to restore harmony	Restorative justice / adaptive management	Ritual offering, apology, community cleansing
Adat	Customary law is rooted in spiritual ethics	Environmental governance / ethical codes	Land rituals, communal rules, taboos

"The land does not punish. It reminds," said a village elder from Tambunan. "When we forget our role in the circle, nature sends us a lesson. That is *Ohusian*."

Land as Sacred Kin

Momolianism sees land not as property, but as ancestral gift and spiritual kin. The earth is not inert – it is alive with memory, meaning, and responsibility. Each hill, river, or tree may be home to spirits. Even rocks have names, and places carry stories that bind generations.

This understanding shapes land use practices. Hunting must never occur during breeding season. Riverbanks must not be disturbed unnecessarily. Offerings are made before entering certain forests. These actions are spiritual obligations – but they also mirror ecological wisdom.

Ritual as Restoration

When *Osogit* is disturbed, rituals are performed to restore harmony. This may include:

- *Rinait* (sacred chants) to call on spirits.
- Water sprinkling to purify space.
- Offerings of betel nut, rice, or animal blood.
- Community participation to share responsibility.

In a 2019 incident in Nabawan, a community experiencing sudden sickness among its children consulted the *Bobolian*, who determined that a sacred spring had been disturbed during road construction. A *Sogit* ceremony was held, involving a symbolic replanting and apology to the spring's guardian. Remarkably, the illnesses ceased shortly afterward.

Scientific Echoes

Modern science increasingly affirms the environmental value of Momolian teachings. For example:

- Taboos on overharvesting mirror biodiversity protection.
- Seasonal planting and harvesting reflect phenological cycles.
- Ritual abstinence and purification align with public health principles.
- Community rituals strengthen psychological resilience and social cohesion.

A well-documented case is the Tagal system in Sabah, where rivers are closed to fishing for long periods under community-enforced rules. When it reopened, fish biomass is abundant, improving both ecological and economic outcomes. This sustainable management model originated from spiritual taboos rooted in Momolianism.

Sacred Origins: Nunuk Ragang

Momolianism is believed to have originated from Nunuk Ragang, the ancestral red banyan tree at the confluence of two rivers – considered the cradle of Kadazan-Dusun civilization. Here, early ancestors are said to have received guidance from spirits on how to live in harmony with the land and each other.

From this origin flows a cultural ethos of reciprocity – take only what you need, offer gratitude, and always restore what you disturb. The concept of *Gompi-Guno* (Use and Care) ensures that natural resources are utilized in a sustainable manner also stems from this cultural ethos.

Nunuk Ragang monument – home of the ancestors of the Kadazan-Dusun
Photo Credit: Wikipedia

A Living System, not a Relic

Contrary to misconceptions, Momolianism is not static or primitive. It is adaptive, evolving with context while holding firm to foundational values. Today, its principles are being rediscovered by younger generations concerned about environmental destruction, spiritual disconnection, and cultural erosion.

“Momolianism is not about worshipping spirits,” said a young environmentalist in Penampang. “It’s about remembering that we are not above nature – we are part of it.”

Transition to Chapter 4

Understanding Momolianism helps us grasp why certain places, especially Mount Kinabalu, are considered sacred and sensitive. It explains why spiritual violations can have ecological consequences – and why rituals of respect must precede every human endeavor.

In the next chapter, we explore Mount Kinabalu not only as a geological wonder, but as a sacred geography – the spiritual heart of Sabah and resting place of ancestral souls.

Chapter 4
Mount Kinabalu — A Sacred Geography

More Than a Mountain

Mount Kinabalu towers not only as the highest peak in Malaysia but as the spiritual summit of the Kadazan-Dusun cosmology. Known reverently as *Akinabalu*, the "Revered Place of the Dead," the mountain is believed to be the final resting place of ancestral spirits – a cosmic bridge between the earthly world and the afterlife.

Long before scientific surveys mapped its granite ridges, Indigenous communities approached the mountain with awe and caution. One must never point at it. One must not speak loudly in its presence. And no one climbs without first asking permission – not just from the mountain itself, but from the spirits who dwell there.

A Landscape of Stories

In oral tradition, Mount Kinabalu is a sacred geography, filled with spirit landmarks:

- The summit is said to be the gateway to the spirit realm.
- Specific rocks, caves, and ridges are believed to house guardian spirits or be sites of past rituals.
- The mist is the breath of ancestors watching over the land.

In one version of the origin story, the spirits of the first humans returned to *Akinabalu* after death to reunite with their source. This belief frames death not as an end but as a homecoming – and the mountain as both tomb and temple.

"When we look at Kinabalu, we are not just seeing a mountain. We are seeing our ancestors, resting in peace, watching us," shared villagers from Bundu Tuhan.

Sacred Mount Kinabalu, revered by the Kadazan-Dusun, is settled by mountain people at the foot of the mountain.
Photo Credit: FT

Rituals of Respect

Before modern tourism, only *Bobolian*s or chosen elders were permitted to ascend the mountain – and even then, only after

elaborate *Monolob* rituals were performed to seek spiritual consent.

These rituals included:

- Offering betel nuts, lime, and tobacco at sacred stones,
- Chanting *Rinait* for safe passage, and
- Abstaining from certain foods and behaviors before and after the climb.

Even today, some guides and porters maintain the tradition of quiet offerings at the base of the mountain, carrying with them the unspoken knowledge that the path to the summit is as much spiritual as it is physical.

A Biodiversity Sanctuary

From a scientific perspective, Mount Kinabalu is a biodiversity hotspot, home to over 5,000 plant species, hundreds of orchids, and unique fauna found nowhere else on Earth. Its elevation range, geological isolation, and climate gradients create a natural laboratory of evolution.

Among its most iconic species is the Nepenthes rajah, a giant pitcher plant that traps insects and even small vertebrates – forming a miniature ecosystem within its modified leaves. These plants are not just marvels of nature, but are considered spiritually sensitive by locals, who traditionally avoid disturbing them.

***Monolob* ritual performed by a *Bobolian* at the foot of Mount Kinabalu.**
Photo Credit: Folk of Dayak Blog

Kinabalu UNESCO Global Geopark

On 20 January 2025, Mount Kinabalu and its surrounding districts – Ranau, Kota Marudu, and Kota Belud – were officially designated as the Kinabalu UNESCO Global Geopark.

This recognition affirms the mountain's geological, ecological, and cultural significance on a global scale.

But for Indigenous communities, the Geopark is not new – it merely acknowledges what they have always known: that Kinabalu is a living entity, worthy of protection not just through laws, but through reverence.

The proclamation of the Kinabalu UNESCO Global Geopark on January 20, 2025. The geopark contains outstanding geological heritages, diverse cultural heritage and rich biodiversity.
Photo Credit: Sabah Baru News

Taboos and Conservation

Local taboos – such as not shouting, not littering, not harvesting rare plants, and not taking "souvenirs" – have long served as unofficial conservation mechanisms. These cultural rules align remarkably well with modern environmental ethics, preserving habitats, regulating visitor behavior, and minimizing human impact.

"It is not enough to protect the mountain with fences or signs," said a ranger from Kinabalu Park. "You must teach people to respect the spirits. That's how you really protect a place."

Kinabalu Park guide explains the dos and don'ts to climbers before the climb to the peak of Mount Kinabalu.
Photo Credit: FT

When Harmony is Broken

When tourists disrespected the summit in 2015 by posing nude, the community felt more than cultural insult – they felt a spiritual wound. Days later, when a powerful earthquake struck, many interpreted it as an *Ohusian* – a cosmic response to *Ahasu'*.

The *Bobolian*s were called to perform *Monolob* rituals of appeasement, including the sacrifice of buffaloes and the invocation of ancestral spirits. These were not symbolic acts of fear, but serious attempts to restore *Osogit* – the balance between humans, nature, and the unseen.

A Mountain Alive

Mount Kinabalu is not just granite and cloud – it is memory, myth, and moral compass. It reminds communities of their place in the larger web of existence, and of the need to live with humility and harmony. Climbing Kinabalu is not simply a physical achievement. It is an act of relationship – one that requires asking permission, walking gently, and giving thanks.

Transition to Chapter 5

In the next chapter, we revisit the 2015 Mount Kinabalu earthquake – not just as a geological event, but as a moment of cultural reckoning. Through the eyes of the *Bobolian* and the hearts of the community, we explore how natural disasters can also be spiritual messages – and how rituals become a means of healing not only the land, but the people.

Chapter 5

The 2015 Mount Kinabalu Earthquake

When the Mountain Shook

On the morning of June 5, 2015, the earth trembled beneath Mount Kinabalu. A magnitude 6.0 earthquake struck the region, triggering landslides and boulder falls that claimed 18 lives – among them, dedicated mountain guides and international climbers. The tragedy stunned Sabah and rippled across the world.

Rockfall associated with the 2015 Mount Kinabalu earthquake.
Photo Credit: FT

To geologists, the earthquake was the result of tectonic stress released along fault lines beneath the Crocker Range. But to the Indigenous people who live in Kinabalu's shadow, the disaster was not only seismic – it was spiritual.

The aftermath of the 2015 Mount Kinabalu earthquake.
Photo Credit: SAR Team

A Spiritual Breach

Just days before the earthquake, a group of foreign tourists stripped naked atop the summit, laughing and taking photos in blatant disregard for local customs. The incident went viral – and outraged the communities of Kundasang, Ranau, and Bundu Tuhan. The act was seen not merely as disrespectful, but as a profound desecration of the sacred mountain.

For the Kadazan-Dusun people, *Akinabalu* is the resting place of ancestral spirits. To expose oneself there is akin to spitting on a grave. Elders warned of consequences. The quake that followed was interpreted as *Ohusian* – a sign that the balance (*Osogit*) had been broken.

"The mountain speaks," said an elder from Bundu Tuhan. "And when it is disrespected, it roars."

Western tourists displaying their antics on top of Mount Kinabalu on May 30, 2015, went viral that angered local communities.
Photo Credit: Emil Kaminski

Monolob: Rituals of Healing and Appeasement

In the wake of the earthquake, *Bobolian*s from Kiau and Bundu Tuhan gathered to perform urgent Monolob rituals – traditional ceremonies to appease the spirits of *Akinabalu* and cleanse the land of spiritual disturbance.

These rituals included: Chanting *Rinait* to invoke ancestral guardians; Offering pinang, rice wine, and animal sacrifices

(buffaloes, pigs, chickens); Sprinkling sacred water at specific boulders and river confluences and Sharing meals among grieving families, rangers, and climbers.

The ceremonies were not private performances. They became public acts of communal healing – reminding people of the sacredness of place and the need for humility in the face of nature.

The *Monolob* ritual to appease Akinabalu after the fatal earthquake on Mount Kinabalu – performed by *Bobolians* from Bundu Tuhan and Kiau.
Photo Credit: Bernama

A Community in Grief and Reflection

The earthquake didn't just displace rocks – it shook the spirit of the community. Families mourned lost sons and daughters. Mountain guides, many from Dusun villages, returned home traumatized yet proud, having risked their lives to save others.

In the days following, rainbows were seen arching over Kinabalu. To many, they were signs that the spirits were calmed – that the rituals had been received, and that healing could begin.

A rainbow arced over Mount Kinabalu on July 4, 2024, as though protecting the mountain. For the local communities, it marks a moment of healing between worlds — a cosmic sign that peace has been restored.
Photo Credit: Justin Liew

Science and Sacred Space

While modern disaster management focused on fault lines, early warning systems, and structural risks, the local response added another layer – a spiritual and cultural dimension that is often overlooked in official reports.

Geologists noted that the earthquake highlighted the need for preparedness in regions once thought stable. But *Bobolian*s

pointed to a different kind of readiness – the need to maintain respect for sacred landscapes and to educate outsiders on cultural protocols.

These perspectives are not contradictory – they are complementary. Together, they offer a more holistic approach to disaster response, where emotional, cultural, and spiritual recovery are given equal attention alongside technical solutions.

Aftershocks and Awakening

The 2015 quake left physical scars on the mountain and emotional ones in the people. But it also sparked a renewed awareness of Indigenous knowledge and sacred geography. Calls were made to include cultural rituals in official recovery plans, to involve *Bobolian*s in tourism protocols, and to educate climbers on the mountain's meaning beyond its summit.

The tragedy became a teachable moment, not just for Sabah, but for the world: that natural places carry more than geological value – they carry spiritual responsibility.

Transition to Chapter 6

Disaster, in Momolian understanding, is often a signal of imbalance. In the next chapter, we revisit a more recent event – the 2025 Keningau flash flood – where both political and environmental violations are believed to have contributed to catastrophe. Through the lens of the Oath Stone and its spiritual implications, we explore how ritual, justice, and reconciliation unfolded once again.

Chapter 6

The 2025 Keningau Flash Flood

Water that Could not be Contained

In early February 2025, torrential rain battered the interior districts of Sabah. In Keningau, the downpour turned catastrophic – flash floods swept through the town, uprooting homes, collapsing bridges, submerging roads, and displacing hundreds. It was the worst flood since Tropical Storm Greg in 1996, and its impact was both physical and psychological.

A vehicle stuck in a ditch during the 9 February flood in Keningau.
Photo Credit: Borneo Post

Filling station in Keningau during 9 February flood.
Photo Credit: Jeflin Miah

Scientists attributed the disaster to a combination of:

- Prolonged heavy rainfall,
- Extensive deforestation upstream,
- Poor drainage infrastructure,
- And possibly, intensifying climate patterns.

But for many in Keningau – especially elders and activists – the flood was more than a hydrological event. It was a spiritual reckoning, tied to a much older story: the Keningau Oath Stone (*Batu Sumpah*).

Degraded water catchment due to uncontrolled opening of forest may have contributed to the February 2025 flash flood in Keningau.
Photo Credit: FT

The Stone of Promise

Erected in 1964, the Keningau Oath Stone commemorates the solemn agreements made when Sabah formed the Federation of Malaysia. Its three core pledges were:

1. Freedom of religion,
2. Autonomy over land and natural resources,
3. Protection of native customs and traditions.

The stone is not just a historical marker – it is a sacred covenant, sealed through traditional *Moningolig* rituals performed by

*Bobolian*s, who invoked the spirits of the land as witnesses to the promises.

"It is not just a block of rock," explained a local *Bobolian*. "It is a voice. It listens. And when its voice is ignored, nature speaks louder."

The Keningau Oath Stone, unveiled on Aug 31, 1964, commemorates the conditions under which Sabah joined the Federation of Malaysia in 1963.
Photo Credit: Wikipedia

A Ritual Breached

On 25 January 2025, just two weeks before the floods, a government-led ceremony was held at the Oath Stone. Federal and state leaders poured water over the monument and released doves – symbolic gestures meant to promote unity and renewal.

However, many indigenous leaders and cultural custodians were outraged. They claimed the ceremony violated protocol by:

- Performing symbolic acts without proper ritual permission,
- Using water instead of blood (traditionally required in *Sogit* ceremonies),
- Excluding *Bobolian*s and *Ketua Adat* from planning and execution.

The ceremony, they said, was spiritually inappropriate, turning sacred tradition into political theater.

Pouring water on the Oath Stone by political leaders two weeks before the devastating flash flood.
Photo Credit: Ewon Benedick Official Media

The Flood and the Backlash

When the devastating flood struck Keningau on 9 February 2025, many saw it as *Ohusian* – a consequence of *Ahasu'* (imbalance), triggered not only by environmental mismanagement, but by spiritual disrespect.

Social media was abuzz with speculation. Indigenous activists revived old warnings: *never treat the Oath Stone lightly*. Calls were made for an official *Sogit* – a ritual compensation (involving seven buffaloes) to restore harmony.

The political response was defensive. Government leaders insisted that their ceremony was symbolic, meant to honor the Oath Stone and spread goodwill. They apologized if traditions were unknowingly breached but rejected the idea that the flood was divine retribution.

The *Sumuku* Ritual: Seeking the Truth

To address the growing tension, the Kadazandusun Cultural Association (KDCA) convened a council of elders and *Bobolian*s. On 1 March 2025, a sacred *Sumuku* ritual was performed at KDCA Hall in Penampang by Libabou and Tantagas *Bobolian*s from Tuaran.

The ritual's purpose was not theatrical — it was consultative. Through trance, chanting, and symbolic offerings, the *Bobolian*s sought to communicate with the *Miontong* – the spirit guardian of the Oath Stone.

What emerged was surprising:

- The spirit rejected the proposed penalty of seven buffaloes and other animals as excessive.
- It clarified that the real sources of disharmony were greed, disunity, environmental destruction, and political corruption – not merely the water-pouring act.
- It called for a *Sogit Pomogunan* (Earth Cleansing) and *Pibabasan* (Peace Accord) involving one buffalo and the participation of both leaders and villagers.

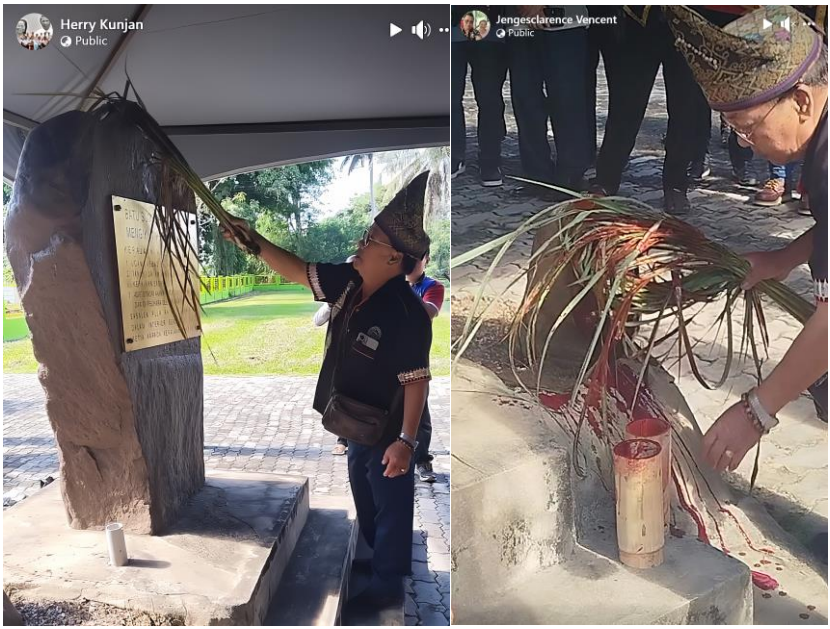
A Ritual of Reconciliation

On 25 June 2025, exactly five months after the controversial ceremony, a formal *Sogit* ritual was held at the Oath Stone in Keningau. It involved:

- Sacrificing one cattle, one pig, and one chicken,
- Sprinkling of blood on the stone,
- Collective prayers led by *Bobolian* Joseph Mitah,
- A communal meal shared among politicians, elders, youth, and spiritual leaders.

This act was not only about forgiveness – it was a symbol of restored balance, a coming together of worlds: political, spiritual, and communal.

“It is not punishment,” said one *Bobolian*. “It is a reminder – that every stone remembers, every forest listens, and the water carries truth.”



A Sogit ritual involving sprinkling of blood at the Keningau Oath Stone performed by *Bobolian* Joseph Mitah.
Photo Credit: Herry Kunjan and Jengesclarence Vencent

Science and Spirit in Harmony

Environmental scientists have since published reports linking the flood to land degradation and insufficient watershed protection. But the traditional interpretation did more than assign blame – it called for healing: of relationships, of land, and of cultural respect.

The *Sumuku* and *Sogit* rituals created space for reconciliation, not conflict. They allowed the community to process trauma,

reaffirm cultural identity, and hold leaders accountable – not through anger, but through custom.

Transition to Chapter 7

From rituals of restoration, we now turn to rituals of healing. In the next chapter, we explore the *Bobolian*'s role as herbalist and healer – how plants, chants, and spiritual care form an integrated system of health that modern science is only beginning to understand.

Chapter 7
Healing Plants and Ritual Practices

More Than Medicine

For the *Bobolian*, healing is not merely a matter of curing the body – it is about restoring spiritual, emotional, and communal balance. Illness is seen as a symptom of disconnection: from the ancestors, from the land, or from one's inner self.

Healing, therefore, must engage not just the body, but the spirit and community.

This chapter explores how *Bobolian*s draw from a deep pharmacopeia of medicinal plants, combined with ritual chants (*Rinait*), symbolic acts, and community involvement to bring about holistic recovery – in ways that are increasingly echoed in modern science.

Healing Through Plants and Spirit

In Tuaran, a *Bobolian* treats a man with joint pain using an herbal compress made of *komburongo* (*Acorus calamus*) – known for its anti-inflammatory and calming effects. But it is not the herb alone that brings healing. The leaves are collected at dawn, under specific moon phases, and accompanied by whispered *Rinait* to call upon the spirit of the plant.

In Penampang, a grieving widow undergoes a cleansing ritual. The *Bobolian* burns *kadok* leaves, waves the smoke over her

body, and chants to gently release the sorrow clinging to her. This ritual is both personal and communal – neighbors attend, comfort her, and share food afterward.

These ceremonies reflect a psychospiritual model of health – one that integrates the emotional, the symbolic, and the ecological.

Komburongo plant is used for its medicinal properties and serves as a ritual tool for the *Bobolian*.
Photo Credit: Dusunology FB

Bobolian Medicinal Material: Traditional and Scientific Views

Modern research is beginning to validate *Bobolian* knowledge, confirming that many traditional remedies contain bioactive compounds with measurable therapeutic effects. For example, scientific studies show that the plant *Premna serratifolia* (*gasing-gasing*) used by *Bobolian* for treating fevers and postpartum recovery has antioxidant and anti-inflammatory effects. It also has anticancer potential**,** particularly against breast cancer cell lines (MCF-7). The phytochemicals include flavonoids, terpenoids, steroids, and tannins.

Local Name	Scientific Name	Traditional Use	Scientific Application	Bioactive Compounds
Gasing-Gasing	Premna serratifolia	Treats fever, fatigue, postnatal recovery	Antipyretic, anti-inflammatory, antimicrobial	Flavonoids, terpenoids, alkaloids
Komburongo	Acorus calamus	Joint pain, stress, spiritual purification	Neuro-protective, antioxidant, calming agent	Asarone, phenyl-propanoids
Kadok	Piper Sarmento-sum	Wound healing, fever reduction	Anti-inflammatory, antimicrobial, antioxidant	Flavonoids, essential oils
Cekur	Kaempferia galanga	Relieve cough, infections; postnatal care	Antimicrobial, stimulant	terpenoids, kaempferol
Sambung Nyawa	Gynura procumbens	High blood pressure, inflammation	Antihyper-tensive, hepato-protective	Saponins, phenolic acids
Tuhau	Etlingera coccinea	Food and medicine (digestive health)	Rich in antioxidants and essential oils	Flavonoids, antibacterial agents

Rituals as Healing Technologies

Ritual is not simply performance – it is a technology of meaning and care. Each chant, gesture, and offering serves to:

- Invoke spiritual allies (plant, ancestor, guardian spirit),
- Reframe illness as an opportunity for renewal,
- Create collective solidarity and emotional release.

In scientific terms, these ceremonies foster:

- Stress reduction (via ritual rhythm, social support),
- Psychosomatic alignment (mind-body awareness),
- Neurobiological benefits (through scent, song, repetition),
- Cultural coherence (affirming one's identity and place).

*Bobolian*s are, in this sense, cultural neurologists – tending not just to infection or injury, but to anxiety, trauma, and alienation.

Ethical Harvesting and Sacred Protocols

Every plant used by the *Bobolian* is considered to have spirit (*Moinat*). Harvesting must be done with care and permission:

- Prayer is spoken before cutting a leaf or stem.
- Only the amount needed is taken – never excessively.
- Harvesting is avoided on certain days or at sacred sites.

"If you take without asking," warns a *Bobolian* from Tambunan, "you do not just harm the plant – you offend its guardian. And then it will not help you."

This ethical stance resonates with contemporary ideas of biocultural conservation, where spiritual values support sustainable harvesting.

Healing as a Community Act

In traditional healing, the community plays an active role. When someone is ill:

- Neighbors assist in preparations.
- Elders offer stories and emotional guidance.
- Children observe, learning customs through experience.

Healing becomes a social process, restoring not only the individual but the relationships around them. This is especially important in cases of mental distress, grief, or trauma.

Modern psychology now affirms what *Bobolian*s have long practiced – that belonging, ceremony, and meaning are powerful medicine.

Transition to Chapter 8

Having explored the intimate knowledge of plants and rituals, we now expand outward to the broader system of Traditional Ecological Knowledge (TEK) – where *Bobolian*s also play a central role in guiding farming, forestry, and resource stewardship. In the next chapter, we explore how this relational wisdom is encoded not in textbooks, but in land, language, and living memory.

Chapter 8
Traditional Ecological Knowledge (TEK)

Knowledge Rooted in Place

Before satellite data, GIS maps, or environmental impact assessments, Indigenous communities across Sabah relied on a form of environmental intelligence now known as Traditional Ecological Knowledge (TEK). This knowledge is not abstract theory – it is lived, practiced, and adapted across generations, grounded in long-term observation of local ecosystems.

TEK is encoded in:

- Rituals and taboos,
- Planting calendars and animal signs,
- Storytelling, song, and symbolic landscapes,
- Oral memory and practice – passed from elders to youth.

At the heart of this system stands the *Bobolian*, whose spiritual authority is grounded in deep ecological understanding.

The *Bobolian* as Ecological Steward

The *Bobolian* is not only a healer of bodies, but a caretaker of the land. They understand the flow of rivers, the timing of rain, the behavior of animals, and the cycles of forests.

Their duties may include:

- Determining the right time for planting or harvesting,
- Advising on the location of new homes or rice fields,
- Leading rituals before tree cutting or river use,
- Identifying sacred sites that must remain untouched.

"The *Bobolian* does not guess," said a farmer from Keningau. "They watch the sky. They smell the soil. They listen to the trees. That is how they know."

Hill rice rotational farming practice (fallow cycle up to 7 years) to maintain soil fertility and slope stability in Keningau.
Photo Credit: FT

Tagal: A Community-Based Practice of TEK

One of the most well-known examples of TEK in Sabah is the Tagal system, practiced widely among Dusun communities in places like Penampang, Ranau, Kiulu, and Kota Belud.

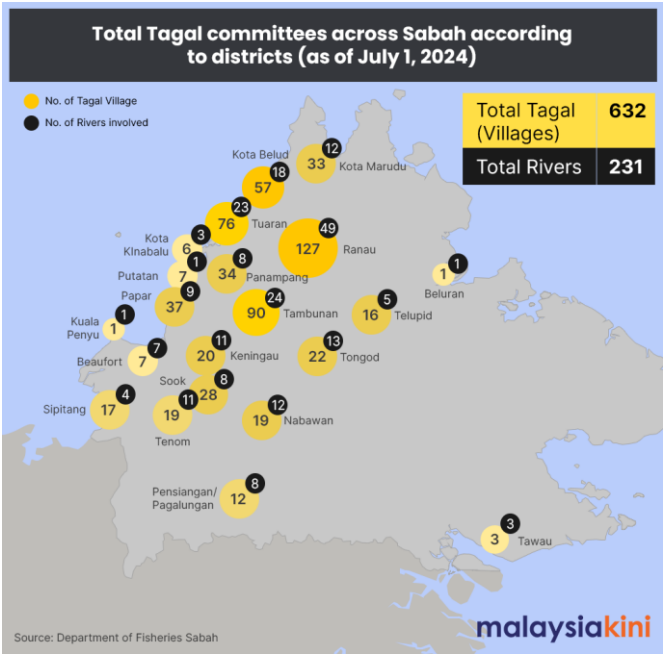
Tagal means “forbidden” – a community-enforced rule where sections of rivers are closed off to fishing for long periods to allow fish populations to recover.

Key principles include:

- Rotational harvesting – only at designated times, with rituals
- Collective ownership – no individual can exploit the river
- Punishment for violators – often in the form of *Sogit* (customary compensation)

This model – rooted in spiritual respect for water spirits and ancestral rules – has become a global model of community-based natural resource management (CBNRM).

Section of river under Tagal System in Moyog River, marked as “No-fishing” zone opens for fishing for a limited period only.
Photo Credit: FT



Distribution of the successful community-based Tagal System in Sabah.
Photo Credit: Malaysiakini

Sacred Sites as Biodiversity Refugia

Many places considered sacred – such as hills, springs, and giant trees – have become accidental biodiversity hotspots, precisely because traditional beliefs protect them from disturbance.

For example:

- *Nunuk Ragang,* the red banyan tree at the confluence of rivers, is a sacred migration site.

- Certain caves in Ulu Tomani are avoided due to ancestral spirits and bat guardians.
- Groves around ancient burial mounds are protected by spiritual taboos.

These practices echo modern conservation biology principles – protecting keystone habitats, preserving endemic species, and respecting ecological thresholds.

TEK in Shifting Environments

Traditional knowledge is adaptive, not static. Communities adjust their practices in response to new threats, such as:

- Changes in rainfall patterns (climate change),
- Invasion of new pests or species,
- Encroachment by logging or plantations.

In Tambunan, farmers have started blending old practices (observing the *kundai* tree's leafing) with new tools (rain gauges). In Ulu Papar, elders now teach TEK alongside basic GPS mapping to protect sacred sites.

This fusion creates hybrid knowledge systems, where tradition and innovation reinforce each other.

TEK and the Law

While TEK is rich, it is still poorly recognized in formal law. Community protocols, spiritual taboos, and *Bobolian* advice are often sidelined in:

- Environmental impact assessments (EIA),
- Forest zoning and land use planning,
- Resource exploitation licenses.

However, new movements are emerging to formalize TEK rights under:

- UNDRIP (UN Declaration on the Rights of Indigenous Peoples),
- Customary tenure mapping initiatives,
- Community conserved areas (ICCAs).

Community elders are increasingly consulted not only in rituals but in land defense, heritage documentation, and policy advocacy.

Youth and TEK Revitalization

A major challenge is that TEK is at risk. As younger generations move to towns or reject traditional beliefs, knowledge transmission weakens.

Yet hope remains. Programs now engage youth in:

- Participatory mapping of sacred and resource sites,
- Intergenerational camps where elders teach plant knowledge and *Rinait*,
- Digital storytelling, where rituals and ecological lessons are preserved in video and audio form.

“If we don’t pass this knowledge, it will disappear,” said a youth leader in Penampang. “But if we adapt it, it can grow.”

Madam Rosina Sogondu (centre) from Penampang shares her knowledge on ritual plants with young students.
Photo Credit: Siung Studio.

Transition to Chapter 9

Having seen how TEK sustains both the land and the culture, we now explore how bridges can be built between this traditional wisdom and modern scientific systems - not by replacing one with the other, but by co-creating new forms of understanding and collaboration.

In Chapter 9, we explore practical models and case studies that show how science and *Bobolian* knowledge can walk together.

Chapter 9
Bridging Tradition and Science

Two Ways of Knowing

Science and indigenous tradition are often portrayed as opposites – one rational, the other mystical; one modern, the other outdated. But both are systems of knowledge, shaped by observation, pattern recognition, and a desire to explain the world.

Where they differ is not in intelligence, but in worldview:

- Science seeks universal laws, tested by repeatable methods,
- Indigenous knowledge is place-based, relational, and spiritual.

Bridging these worldviews is not about forcing one into the mold of the other. It is about dialogue – recognizing that each has strengths and limits, and that together, they can generate richer, more ethical knowledge.

From Consultation to Co-Creation

In many conservation and development projects, indigenous voices are often consulted after decisions are made – if at all. True bridging happens when knowledge holders are involved from the beginning, as co-designers, co-researchers, and co-decision-makers.

This is called co-production of knowledge.

Traditional Knowledge (TK)	Scientific Knowledge (SK)
Place-specific, relational	Universal, standardized
Oral, experiential	Textual, experimental
Passed down through generations	Taught in institutions
Embedded in culture and spirituality	Separated from belief systems
Validated through community & ritual	Validated through peer review & data
Adaptive to environment and values	Adaptive to evidence and modeling

When TK and SK are brought together respectfully, they enrich each other. For example, a *Bobolian*'s knowledge of a healing plant's emotional symbolism may complement a chemist's analysis of its bioactive compounds.

Case Study 1: Earthquake Interpretation and Recovery (Kinabalu 2015)

After the 2015 earthquake, scientists rushed to assess structural damage and seismic causes. But local communities were already responding — not with instruments, but with rituals.

A *Monolob* ceremony was held to appease spirits disturbed by desecration. Skeptics dismissed this as superstition, but those who attended felt emotional and spiritual closure. In parallel, scientists installed seismometers and developed awareness campaigns.

Eventually, both knowledge systems influenced policy:

- Climbers were required to undergo cultural briefings,
- Local guides received formal recognition,
- *Bobolian* voices were included in post-quake documentation.

This is bridging in action – each system doing what it does best, while respecting the other.

The *Adat* Advisory Council of Mount Kinabalu is tasked with carrying out the annual *Monolob* ritual at the Timpohon Gate of Mount Kinabalu to ensure the safety and well-being of visitors and climbers.
Photo Credit: Malaysia Aktif

Case Study 2: The Tagal River System

As discussed earlier, the Tagal system – a spiritual practice of river closure – has been adopted into official state programs as a model of community-based natural resource management.

Scientists from Sabah Fisheries Department worked with village elders to:

- Measure fish recovery rates,
- Map Tagal zones using GPS,
- Translate rules into bylaws.

Rather than replacing the spiritual with the scientific, they integrated both – enabling Tagal rivers to be legally protected, scientifically validated, and culturally respected.

The tagal system in Moyog river was officially adopted by the Sabah Fisheries Department (SFD) in January 2002.
Photo Credit: Borneo Post

Challenges in Bridging

While promising, bridging TK and science comes with risks:

- Misappropriation: Researchers extract traditional knowledge without benefit-sharing.
- Simplification: Sacred concepts are reduced to data points, losing meaning.
- Tokenism: Indigenous participation is superficial or symbolic only.

To avoid this, partnerships must be built on:

- Free, Prior, and Informed Consent (FPIC),
- Equity in authorship and benefits, and
- Cultural humility and long-term relationship-building.

The Role of *Bobolian*s in Research and Policy

More institutions now recognize that *Bobolian*s are not merely cultural performers – they are legitimate knowledge holders with insights into:

- Forest regeneration,
- Climate prediction (via phenological signs),
- Watershed management, and
- Mental health and conflict resolution.

Some universities and NGOs in Sabah have started to:

- Invite *Bobolian*s as guest speakers,
- Involve them in biodiversity mapping,

- Collaborate in community heritage documentation, and
- Advocate for their recognition in environmental policy.

The Next Generation: Translators Between Worlds

Young indigenous scholars, activists, and artists are now stepping in to bridge the divide:

- Writing bilingual children's books on traditional stories and science,
- Creating films that document *Bobolian* rituals with scientific subtitles, and
- Hosting workshops where botanists and elders co-lead forest walks.

They are not forced to choose between tradition and science – they are weaving both into new forms of wisdom.

"I studied environmental science at university," said a youth from Kiulu. "But I learned about ethics and respect from my grandmother. I need both."

Transition to Chapter 10

In the final chapter, we turn our attention to the future. With climate change, cultural erosion, and political shifts threatening indigenous systems, what actions can we take to honor, protect, and sustain the legacy of the *Bobolian* – and the sacred balance they stand for?

We explore pathways forward: policy, education, land rights, and the reawakening of ancestral values in modern times.

Chapter 10
Way Forward — A Shared Future

Where Do We Go from Here?

As we stand at the crossroads of environmental crisis, cultural erosion, and spiritual forgetting, the knowledge of the *Bobolian* and the worldview of Momolianism are more relevant than ever. What was once dismissed as backward or superstitious is now increasingly seen as a living legacy of ecological intelligence, moral clarity, and community resilience.

The question is no longer whether this knowledge is valuable – but how do we choose to honor, sustain, and evolve it in a changing world.

The Threats We Face

Many forces now threaten the continuity of *Bobolian* knowledge and practices:

- Land loss due to logging, plantations, and infrastructure,
- Declining intergenerational transmission as elders pass away,
- Cultural commodification that turns sacred rituals into tourist shows,
- Policy exclusion, where traditional laws are ignored by state mechanisms, and
- Spiritual disconnection among youth, fueled by urbanization and stigma.

These are not just challenges to heritage – they are challenges to the soul of a people.

The Responsibilities We Share

Honoring the legacy of the *Bobolian* requires collective action from multiple fronts:

1. Community Action

- Revive intergenerational teaching of *Rinait*, plant lore, and rituals.
- Strengthen customary laws and protocols for land and sacred sites.
- Recognize and support the leadership of elders, women, and *Bobolian*s in decision-making.

2. Education and Language

- Integrate traditional knowledge into school curricula, especially in rural and indigenous schools.
- Develop Kadazan-Dusun-Murut language resources for spiritual and ecological terms.
- Promote community-based documentation projects using oral histories, videos, and mapping.

3. Policy and Recognition

- Legally recognize *Bobolian*s as cultural knowledge holders in Sabah's heritage and environmental governance frameworks.

- Enforce Free, Prior, and Informed Consent (FPIC) in all development projects affecting customary territories.
- Include traditional rituals and protocols in disaster preparedness and healing processes.

4. Science and Collaboration

- Support co-research projects where scientists and *Bobolian*s work together as equal partners.
- Protect intellectual property rights over indigenous medicinal knowledge and sacred texts.
- Train facilitators and mediators who can bridge cultural and institutional worldviews.

A Spiritual Awakening

At the deepest level, the revival of *Bobolian* teachings calls for a spiritual awakening – a shift from extraction to relationship, from control to coexistence. It means:

- Seeing rivers as kin, not resources,
- Hearing wisdom in the wind and warning in the earth's rumble, and
- Speaking to the land with gratitude, not command.

"To walk the old path is not to go backward," said a *Bobolian* from Tuaran. "It is to go forward with memory."

Melvin Sebastian, Adam Gontusan and Dunstan Oswald Roland – promising young *Bobolian* apprentices performing a *Mamason* and *Mamanta'* ritual in August 2023.
Photo Credit: FT

The Role of Youth

The future of Momolianism depends on the youth – not only to inherit, but to reinterpret and re-embody this knowledge in ways that are alive and relevant. Whether as educators, artists, farmers, scientists, or spiritual seekers, they can become the next generation of cultural guardians.

Some may not become *Bobolian*s in a formal sense, but they can still carry the *Bobolian* spirit — one of humility, stewardship, and respect.

Youths participate in a learning session related to the *Bobolian* beliefs and rituals held in Penampang in August 2023.
Photo Credit: FT

A Living Legacy

The *Bobolian* is not a relic of the past. They are a compass for the future. Their chants echo the heartbeat of the forest. Their rituals realign broken relationships. Their presence reminds us that knowledge is not only in books, but in breath, memory, and sacred silence. As we look ahead, let us not ask only how we can save the *Bobolian* – but how the *Bobolian*'s teachings might save us.

Auntie Maria from Kampung Bundu Tuhan shares, "Being a *Bobolian* is not only about rituals – it is about listening to the land, caring for people, and respecting the spirits. I hope the

younger generation will carry on these traditions, not only for culture but for the health of the earth."

***Bobolian* elders and students during a learning session related to the *Bobolian* rituals held in Penampang in January 2023.**
Photo Credit: FT

Final Reflection

May this booklet not merely be read but remembered.
May it awaken in each reader the call to listen, learn, and act with reverence.
May the voices of the ancestors continue to guide us – through the land, through the rituals, and through the firelight of those who still remember.

Glossary of Terms

Term	Meaning
Adat	Traditional customary laws that govern behavior, social obligations, and community conduct.
Ahasu'	A state of imbalance or spiritual disturbance that disrupts harmony between humans and nature.
Bobolian / *Bobohizan*	A traditional priest, healer, and spiritual guide among the Kadazan-Dusun-Murut peoples.
Gasing-Gasing	A medicinal plant (*Premna serratifolia*) used to treat fever and physical aches.
Kadok	A leafy herb (*Piper sarmentosum)* used in healing rituals, especially for cleansing grief.

Komburongo	A sacred plant (*Acorus calamus*) used for purification and calming rituals.
Moinat	The spirit or soul inherent in all beings – humans, animals, plants, and natural features.
Momolianism	The spiritual belief system of the Kadazan-Dusun-Murut centered on balance and reciprocity.
Moningolig	A traditional ritual to bless or seal agreements, especially in sacred or political contexts.
Monolob	A ritual performed to appease angry spirits, often after a disturbance of sacred land or sites.
Miontong	A guardian spirit – in this booklet, associated with the Keningau Oath Stone.
Ohusian	The misfortune or consequence resulting from Ahasu', typically seen as a warning or punishment.

Osogit	A state of cosmic or environmental balance; a central principle in Momolianism.
Pibabasan	A peace accord ritual conducted to reconcile parties and restore community harmony.
Rinait	Sacred chants or invocations used by *Bobolian*s during healing, rituals, or communication with spirits.
Sogit	A ritual offering or compensation to restore spiritual and social balance after a transgression.
Sumuku	A high-level ritual for consulting spirits on matters of great spiritual or communal importance.
Tagal System	A community-based river management system where fishing is regulated through traditional rules.

Tuhau	A local herb (*Etlingera coccinea*) with antimicrobial properties, often used in traditional cooking and medicine.
Traditional Ecological Knowledge (TEK)	Cumulative knowledge of the environment passed down through generations, integrating observation, culture, and spirituality.
Phenology	The scientific study of seasonal natural events, such as flowering or animal migration patterns.
Bioindicator	A species or biological signal that provides clues about environmental conditions or changes.
Sacred Geography	A landscape considered spiritually significant, often associated with ancestral presence or ritual activity.

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