



Youth Voices



# An Ode to Future Generations

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**ABSTRACT**—Prior to the conference, a search was made to identify youth leaders on climate change and related issues from all countries of ASEAN. In August 2022, twenty-four were brought together for a workshop in Bangkok. They elected Joshua Anak Belayan to give a conference keynote on their behalf, and they formed into four groups which each chose a topic to work into a presentation at the conference. Below is a lightly edited text of the keynote speech, and a summary of the four presentations.

The right to a clean, healthy and sustainable environment was officially adopted by the United Nations General Assembly to cement the rights of future generations to enjoy the life that our ancestors and we have enjoyed for thousands of years. This legislation also helped to incentivize many environmental human rights defenders such as indigenous people who have fought valiantly to preserve their land, culture and livelihood against the unfettered greed of corporations which focus on short-term profits. As an indigenous Bornean who has roots both in Brunei and East Malaysia, Sarawak, I have seen how government policies influence the health of the forest. In Brunei, the revenue from the fossil fuel industry obviated any need to commercialize the forest, whilst in adjacent Sarawak, many forests are cleared for both timber and palm oil. At the border, there is a clear line between the monoculture palm oil of East Malaysia and the thick tropical rain forest of the Brunei border (Figures 1, 2).

Recently, I had a conversation with my grandma about how flooding is more rampant than before and how the trees once helped to manage the flood. She suddenly said quite passionately “*siapa bawa tauke balak sama sawit tu datang sini? - perintah lah!*” Or in English: who and what enabled this timber and palm oil conglomerate greed to begin with? We all know the answer, and that’s our policy-makers and leaders. This symbiotic relationship between corrupt leaders and businesses is not a surprise in this part of the world. Often these leaders are of indigenous origin which justifies the exploitation of the forests because the leaders enabled the concession of these tribal lands to begin with.

In 2022, our region hosted three major geopolitical and trade summits. At this point, why do we fly thousands of miles, contributing immensely to emissions, just to agree to the status quo? This constant “beating of the drum” might be redundant but nonetheless necessary because leaders and policy-makers are not fulfilling their commitments to their grand and great-grandchildren.

I’d like to consider myself a rational optimist because I believe many strides have been made. One highlight from the 2022 COP is the introduction of the loss and damage clause, allowing developing countries to claim compensation from the developed global

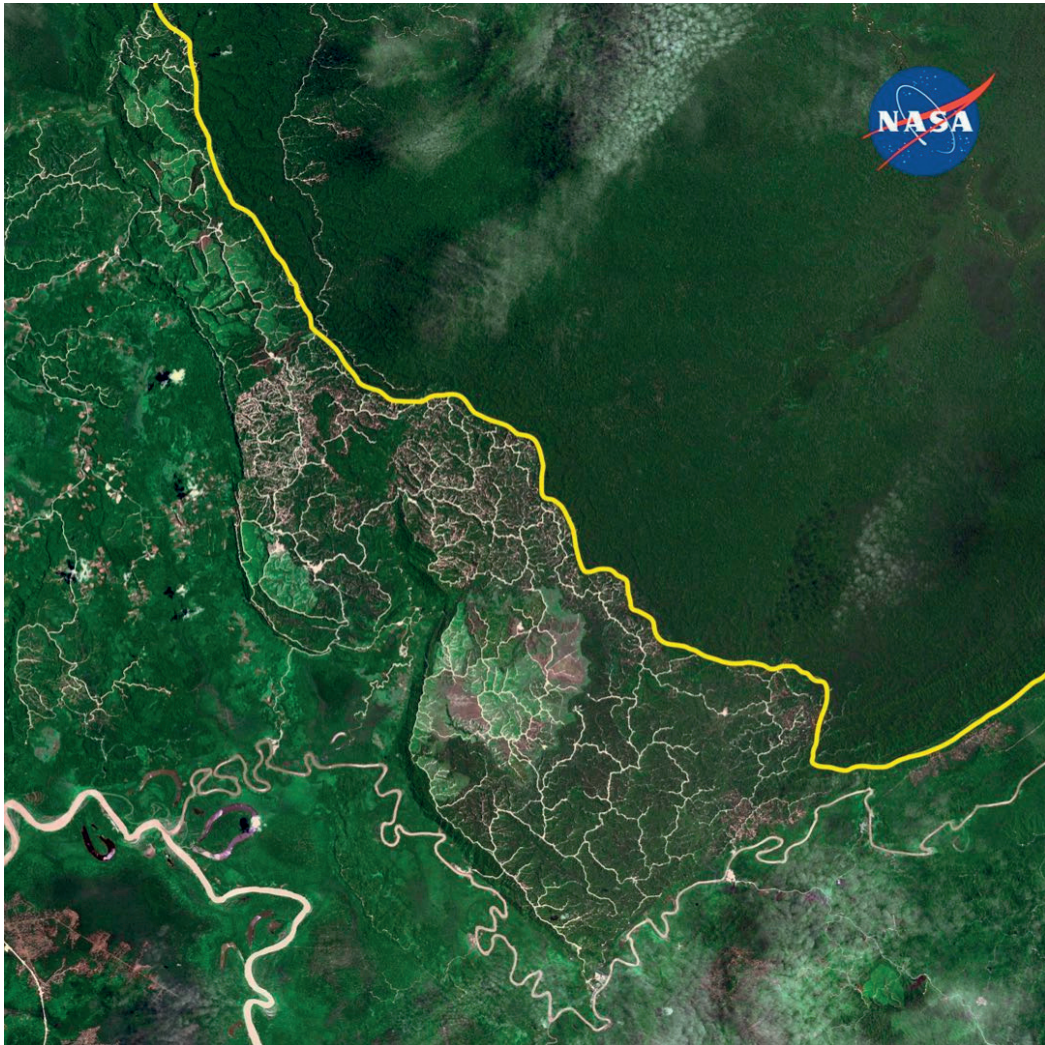


Figure 1. The boundary between Sarawak (left) and Brunei near Mukim Sukang, Belait, Brunei Darussalam, showing the stark difference in vegetation (source: NASA, <https://www.jpl.nasa.gov/images/pia22034-brunei-sarawak-border>)

north for climate-related disasters in their region. Economies which developed in the 19th and 20th centuries have a moral duty to tackle their own emissions to give room for developing economies to expand their economic capability to enrich their population..

I am also pleased to see a growing movement supporting indigenous people's rights, especially acknowledging their contribution as environmental defenders of the land which is very much intertwined with their culture, religion and identity. Many have died protecting their heritage land, which for centuries had been feeding their people. Living off this land also helped these people to acquire knowledge from their environment, which in turn enabled them to manage their resources sustainably and to predict any approaching disaster. This knowledge can provide tools for adaptation and mitigation.

I have the great privilege of being amongst youth in both ASEAN and the Asia-Pacific Region who championed environmental and climate justice within their localities. At the recent summit, I heard an old yet new perspective on how our ancestors utilized their local knowledge to adapt to changes within their localities. I would also like to



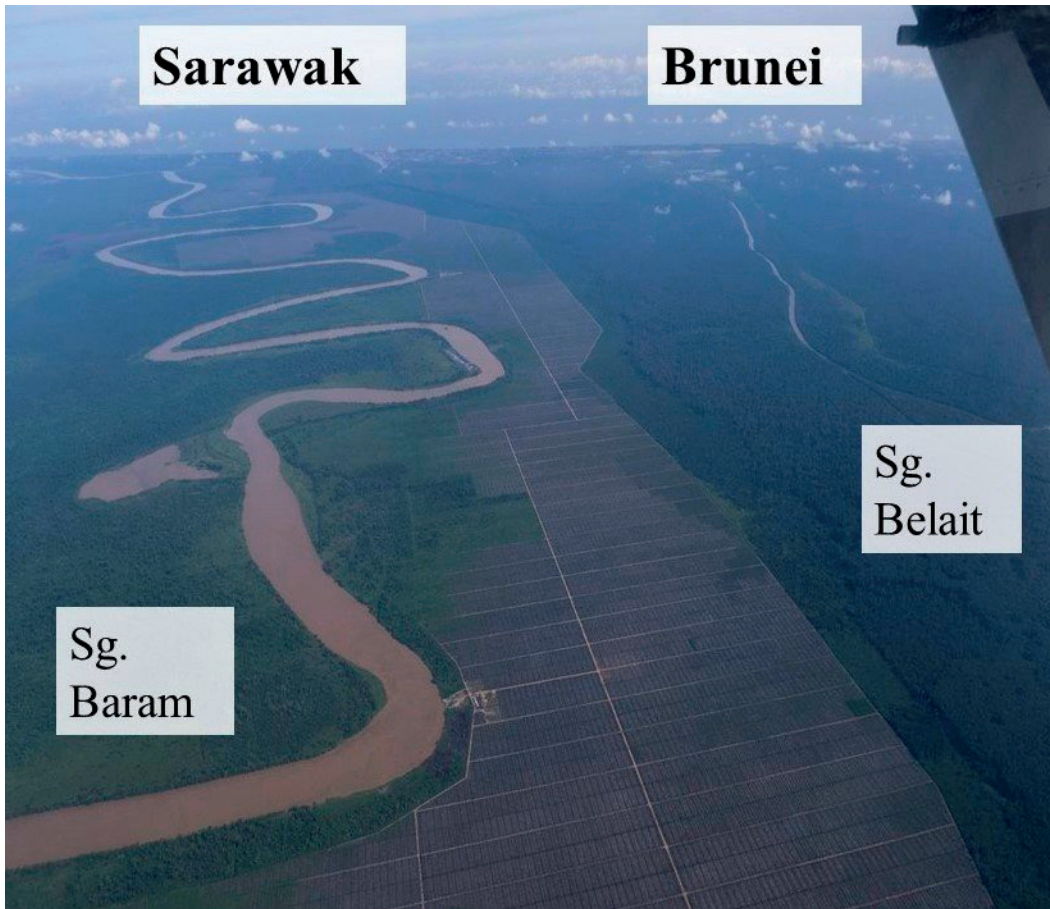


Figure 2. Side by side comparison along the Brunei-Malaysia border illustrating the intense palm oil development along the Baram river (source: Brunei Nature Society Nature Society, <https://images.app.goo.gl/Zm8n5yDGJZryV9CEA>)

highlight Brunei's initiative in establishing the ASEAN Centre for Climate Change which has been agreed upon in principle by the ASEAN Member States, but needs real support and commitment to further this initiative.

Policy-makers are not the only people who can influence rapid change. Businesspeople can shift their mindsets away from short-term profit and high-income revenue streams and rather look towards long-term sustainable growth. All of us have a role to play. Climate change does not discriminate. It affects all levels of society, just some later than most. I genuinely hope people in positions of power will consider the topics presented at this conference and I hope the event will inspire some passion for change.

## Sustainable Living for the World

Sustainable living starts from thinking about the basics: where we live and what we wear.

In the Indonesian city of Semarang around new year, some extreme weather caused a housing complex to be flooded up to 2.5 meters deep, so people had to climb up onto their roofs to stay dry. Moreover, this was not a low area, but quite high up in the hills. It turned out the housing complex had been built very close to a river bank. Local wisdom knew this was wrong, and local regulations prohibited construction within 30 meters of a river bank, but a permit had been issued. Now the residents have to pay the cost, not only in damage to the property but also the impact on their health.



Figure 3. Ho Tay Pidok Library, Savannakhet, Lao PDR (photo from <https://discoverlaos.today>)

All humans need a roof over their heads and clothes on their bodies. But the construction industry and the clothing industry are two of the biggest contributors to global carbon emissions and to global waste.

Half a century ago, development and urbanization were seen as ways to improve everyday lives. Few people thought about the consequences: declining air quality, congestion, traffic, noise pollution, health problems, and climate change. The building industry is responsible for 40 percent of global carbon emissions and 2 billion tonnes of waste a year (<https://architecture2030.org/why-the-building-sector/>). What can we do about this?

We have forgotten about the beauties and benefits of our traditional, vernacular architecture.

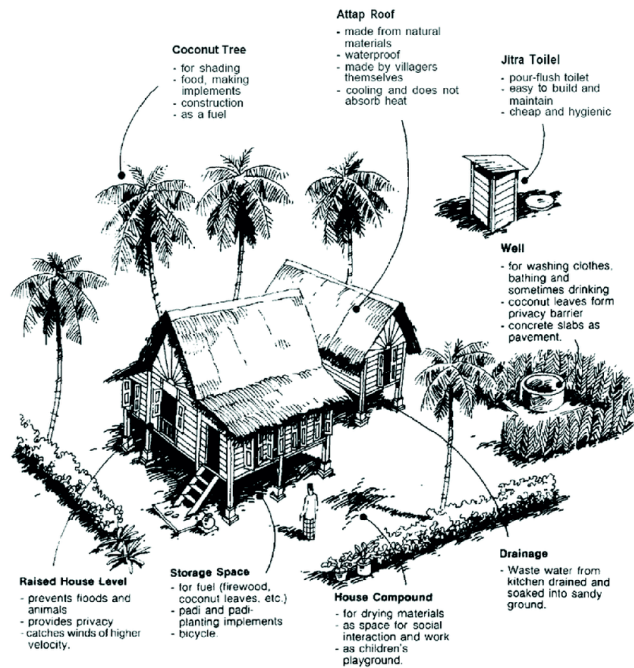


Figure 4. The external environment of the Malay House (from Lim Jee Yuan, *The Malay House*, 1987)

Vernacular architecture has four key elements. It must

1. respond to the climate conditions;
2. respond to the needs of the community;
3. be a cultural reflection of the nation; and
4. use local materials and techniques.

What does this mean in Southeast Asia?

In Southeast Asia, we share the same hot and humid tropical climate, and we share the vulnerability to natural disasters of floods and earthquakes, so we have many similarities. We like to build houses on a raised platform to allow the air to circulate and to provide for flooding. We like to have greenery to serve as a natural fence and to give shade and freshness. We like to have verandahs and balconies where the family can gather to relax in the shade.

Our traditional construction used natural materials that were found close at hand, reducing the need for transportation. These could be just as durable as modern materials. The Ho Tay Pidok library in Lao PDR is 400 years old (Figure 3; <https://discoverlaos.today/savannakhet-province/thing-to-do/hotay-pidok-library>). And when the materials do decay, they become fertilizer or can be repurposed in other ways.

There is intangible heritage embedded in the construction. At Inle Lake in Myanmar, the community cooperates to build a new house. The process starts with rituals to ask permission from the spirit of the land, and raise the sacred post. These traditions are passed down from generation to generation.



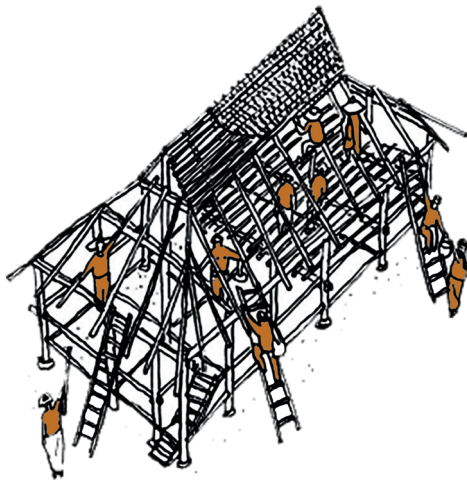


Figure 5. Communal house construction, Shan States (from: Rawiwan Oranratmanee, *Vernacular Houses of the Shan in Myanmar in the Southeast Asian Context*, Faculty of Architecture, Chiang Mai University)



Figure 6. Textile from the Xonphao group (photo from: <https://www.facebook.com/Xonpao/photos>)

Today we have “fast fashion”. The fashion industry makes clothing fast, and consumers use it fast. The costs are hidden from our eyes. The garment industry produces 92 million tonnes of waste a year, is the second biggest consumer of water, and responsible for 2 to 8 percent of carbon emissions (<https://earth.org/statistics-about-fast-fashion-waste/>; <https://www.unep.org/news-and-stories/press-release/un-alliance-sustainable-fashion-addresses-damage-fast-fashion>). Garment workers are exposed to low wages, poor conditions, sexual harassment, and health risks from handling carcinogenic materials ([https://www.oneplanetnetwork.org/sites/default/files/unep\\_sustainability\\_and\\_circularity\\_textile\\_value\\_chain\\_1.pdf](https://www.oneplanetnetwork.org/sites/default/files/unep_sustainability_and_circularity_textile_value_chain_1.pdf)).

Again, we should look to our ancestors. They made clothing *slowly* from natural fibers using natural processes, resulting in clothes that are comfortable to wear. They preferred items that could be used in multiple ways – as a shawl, a head cover, or a baby sling. And they favored local designs which were a distinctive part of local identity.

Xonphao is a non-profit organization in Lao PDR that supports people with disabilities to make clothing using traditional materials and traditional skills. Members of the group come from different ethnicities. They live together and they put different stories, different patterns and different skills into the clothes they make. They grow many of the raw materials they need. The group has also experimented with making accessories like bags from single-use plastic. They have been empowered to overcome their disabilities.

What are the messages from these stories?

In industries like construction, making a quick profit today may result in hidden costs to be paid in the future. The same can be seen on a global scale in the construction and textile industries. We must develop a mindset on sustainability. That means favoring



Figure 7, 8, 9. Xonphao group, Lao PDR (photo 5, 7 from <https://www.facebook.com/Xonpao>; photo 6 by Souphanith Paengmala)

local and natural materials, respecting nature, and preserving intangible culture. We must respect the wisdom of the ancestors and question how it can be relevant today. Architects must study local designs and find ways to adapt them to the climate, the natural environment, and the social demands of today. We must put pressure on business and government to support grassroots projects, marginalized people, and traditional methods.

We must look to traditional culture for learning on ethics, empowerment and the value of nature for the benefit not only of the environment but also our own wellness and health.

Widya Amasara, young heritage professional, Indonesia  
 Souphanith Phaengmala, environmental worker, Lao PDR  
 Nay Myo Htet, architecture student, Myanmar  
 Chanraksmeay Seng, architect, Cambodia



## Sustainable Cultural Production

For production to be sustainable, it must be designed to work within the ecosystem, without causing damage. At present, the world's oceans are being ravaged by plastic waste and by agrochemicals. This need not be so.

Every year, 8 million tons of plastics end up in the ocean. These materials take 800 years to degrade. They break down into micro-plastics, cycling into the food chain, and eventually into our stomachs.

The emphasis on food production through higher yields is causing imbalances in the nutrient system. The oceans are overloaded with nitrogen and phosphorus from agrochemicals. These chemicals foster algae blooms which suffocate all life underwater, and result in emissions of nitrous oxide, reckoned to be 300 times more harmful to the climate than carbon dioxide.

We can try to reduce the use of plastics and fertilizers, but that is difficult. An alternative is to make plastics and fertilizers from materials that are kind to the ecosystem. Here there is an opportunity to use seaweed that is well established as a product all round the coasts of Southeast Asia.



Figure 10. Harvesting seaweed at Samporna in Sabah (photo by Bernama Photo via The Borneo Post)

There are records of seaweed production in Vietnam back to the 10th century. Now there is commercial production of seaweed also in Mindanao and Sula in the southern Philippines, along the coasts of the peninsula in Thailand, in Kampot province of Cambodia, in Rakhine and Tanintharyi areas of Myanmar, in Indonesia, and on the east

coast of Sabah in Malaysia. The varieties include *Eucheuma* and *Kappaphycus*. The seaweed is used for food, animal feed, traditional medicines, and the extraction of agar.



Figure 11. Seaweed production around Southeast Asia.

The calm waters around Sabah are especially good for seaweed production. The main producers are the boat dwellers or sea gypsies, known as Bajau Laut, Sama Dilout and other names around the region. They live from the ocean through fishing, pearl diving, and various crafts. They live on their boats, in stilt-houses built on reefs or small islands, or on house-boats.



Figure 12. Sorting seaweed in Sabah (photo courtesy of Salleh Abdul Salleh via New Straits Times)

To sustain the ecosystem, products should be designed based on their natural function, and their lifecycle should be a circle where the end is the beginning is the end. Seaweed has many applications. It can be used as fertilizer, which is spread on farmland, from where trace elements are leached into the waterways, and return to the sea. It can be converted to seaweed powder which is used to produce bioplastics, pharmaceuticals, or cosmetics, then degrades into carbons, and again trace elements are leached from landfill into waterways and back to the sea.

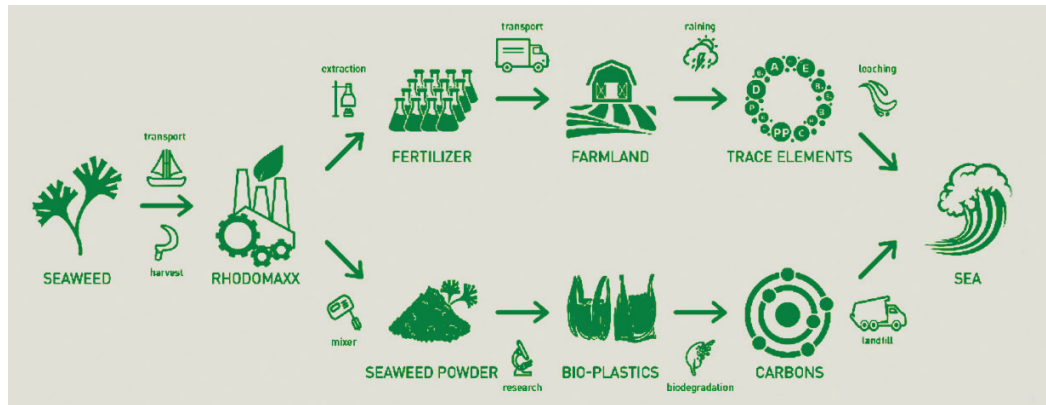


Figure 13. Lifecycle of sustainable seaweed production

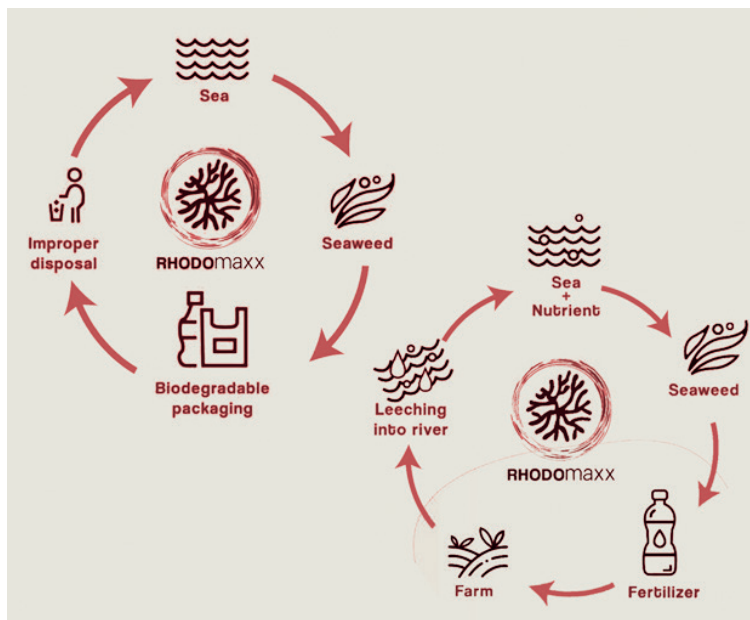


Figure 14. Lifecycle of sustainable seaweed production

This industry has the potential to transform the economic and the social status of the coastal communities that have the local wisdom on the cultivation of seaweed. This project will need a lot of support from government and should involve the local communities as stakeholders from the beginning. They will need access to finance. They



deserve fair payment for their work. The aim must be to create a production system that can be scaled up and can connect to major markets in the future, similar to the model of biofuels over recent decades. It can be like turning the coastline into a fertilizer mine or a bioplastics mine.

A truly bio-circular production system for seaweed can reduce emissions and reduce ocean waste



Figure 15. Cultivating seaweed at Samporna in Sabah (photo by Bernama Photo via The Borneo Post)

The vision is a production system that is based on local wisdom and innovation; that is truly bio, circular, and green; that reduces emissions and pollution; and that enhances the social and economic status of local communities that are often marginalized.

All with humble seaweed.

Chung Ngin Zhun, Malaysia  
Thepduangchan Bounthideth, Lao PDR  
Paolo Andrew C. Hasegawa, Philippines  
Shar Thae Hoy, Myanmar

## Faith and Culturally Based Environmental Attitudes

The 370 million indigenous people are only 5 percent of the world's population, but they hold tenure over 25 percent of the world's land surface and support almost 80 percent of global biodiversity. They have strong and intimate connections to nature and to higher beings. Their stewardship of natural resources is closely bound up with their faith. Their stewardship and their faith are vital assets in the fight against climate change. But they struggle to survive and to be heard.



Figure 16. The impact of Typhoon Haiyan or Yolanda in the Philippines (photo by Kevin Frayer, Getty Images)

In 2013, Typhoon Haiyan or Yolanda, one of the strongest and deadliest ever, struck the Philippines, killing perhaps 10,000 people, affecting over 3 million, and leaving floods that took three months to recede.

The Mamanwa are an indigenous community in Samar and Leyte provinces where the typhoon struck hard. Nobody in the community died. Two weeks earlier, a female



Figure 17. The Mamanwa of the Philippines (screenshot from UNTV News and Rescue)



elder had an omen, a warning in a dream. They took refuge in *kurob*, evacuation shelters, situated on high ground, sheltered by large rocks or caves, and designed to be low to the ground to evade the wind. These *kurob* played a crucial role in their survival.



Figure 18. The *kurob* shelters of the Mamana (photo: Nimfa Bracamonte)

According to their belief, the warning was given by Magbabadja, the creator and supreme being, who also creates the typhoons as punishment for sin and wrongdoing.

The Mamana relocated to Samar, an island facing the Pacific Ocean which is frequented by typhoons. Over hundreds of years, the ways to survive natural disasters have been ingrained in their beliefs, practices and faith. They regularly cultivate sweet potatoes and taro as crops that will not be devastated by a natural disaster and can enable them to survive.

The Mamana have their own ecological calendar which is focused on the wind. Each of the winds that blows at different seasons has its own name and character. The Mamana monitor these winds to time their agricultural activities and to anticipate typhoons. They know that if the *Kabunghan* wind and the *Kanaway* wind interact in the last quarter of the year, there is a risk of high winds, heavy rain, floods and landslides.

Timing is an important part of indigenous knowledge and practice across Southeast Asia.

In Aceh province of Indonesia, the largely Muslim communities along the coast follow *Hukum Laut*, the law of the sea. In accordance with this law, they will not go out to fish on a Friday. This practice is a matter of faith, but also has an underlying rationale. Marine life has a break from human activities. Humans have a chance to get together as families. Boats and fishing gear can undergo routine maintenance.

In Borneo, the indigenous Iban and Kedayan people also pay attention to timing. Traditionally they practice rotational cultivation in the forest areas. They consult the stars for guidance on the timing of cultivation and other practices. At the start of a cultivation cycle, they carry out rituals to ask permission from the land and to receive signs from the gods which guide the what, where, and when of their cultivation.

Shifting cultivation is often vilified for destroying the forests, but these communities have pursued these practices for hundreds of years and Borneo is still covered with forest. Their practice is designed to allow the forest to regenerate and to allow other species to coexist.

The Kedayan have an ecological calendar. It allocates times of the year for various tasks. It identifies signals such as bird calls that trigger certain tasks. It makes space for animals that live in the same ecosystem to survive and prosper. It includes rituals to give thanks and ask for blessings.



Figure 19. The Iban carrying out a ritual at the start of the agricultural cycle

But these indigenous communities are under pressure. Many have already been displaced. They have to battle with government and battle with the encroaching palm-oil plantations that clear-cut the forest, trigger soil erosion, and threaten their way of life, their identity, and their connections to the land and to the gods.

Each indigenous community is different, but there are also commonalities. They are intimately connected to nature. As a result of long experience, methods for protecting the ecosystem and mitigating natural disasters are embedded in their indigenous knowledge and practice.

They also face some common challenges.

First, the dominance of the Western episteme has marginalized indigenous knowledge systems and practices. Second, states and other institutions practice policies which are incongruent with realities at the grassroots. Third, indigenous peoples have to struggle to survive in the face of the dominant contemporary culture.

There has been some fighting back. Academics such as F. Merlin Franco at Universiti Brunei Darussalam have documented the Kedayan ecological calendar, presenting these practices in a format that accords with conventional ideas on how knowledge should be presented. But it is still difficult to explain how the Mamanwa avoid a disastrous typhoon because of an omen delivered in a dream.

In sum, indigenous communities across Southeast Asia have close cultural and spiritual connections with the environment. They possess vast knowledge accumulated across generations, but they are threatened by the advance of the dominant contemporary

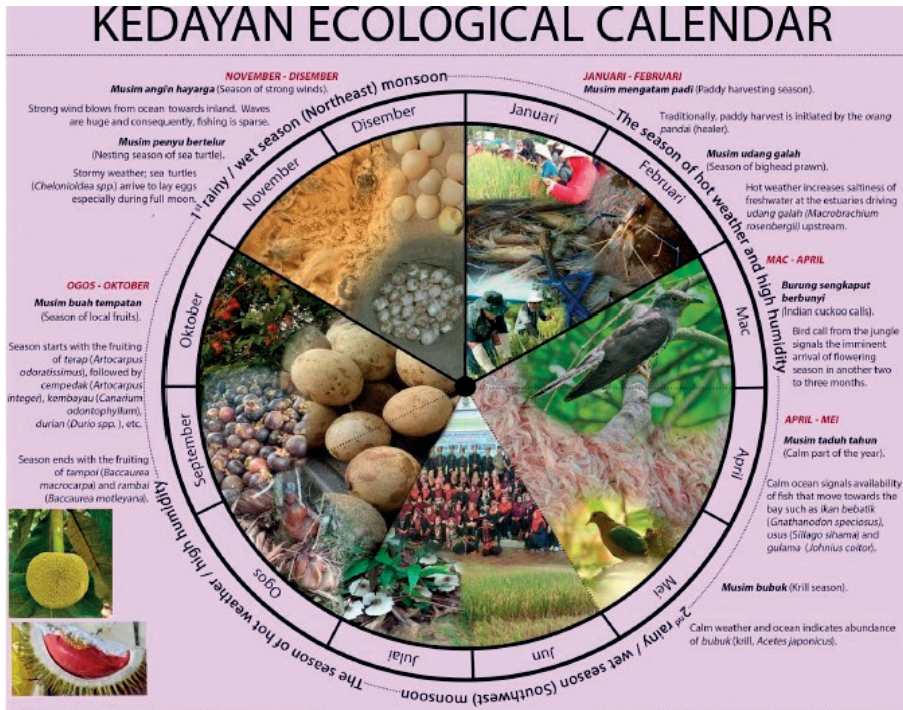


Figure 20. The Kedayan ecological calendar

culture. It is important to preserve this knowledge and to mobilize it on a larger scale in green initiatives to combat and mitigate the effects of climate change.

### Call for action!

- Create an enabling environment that allows communities to preserve their beliefs and knowledge systems and to practice their faith and culture-based environmental activities.
- Persuade national and international institutions to recognize the effective contributions of indigenous knowledge systems and practices to mitigating natural disasters
- Enhance the participation of indigenous communities as rightful stewards of the environment in the local, national and international agenda for conservation of the environment and combating climate change.
- Empower the leaders of indigenous communities to communicate more effectively with the world by assisting with knowledge, networks, and platforms.

Alex Lew Wen Jie, Singapore

Alfikri Muliadi, Indonesia

Joshua Anak Belayan, Brunei Darussalam

Royce Lyssah M Malabonga, Philippines



## Climate Action: Lost in Translation

Why is it important to think about language and translation in the context of traditional wisdom and climate action?

If you look at the map of biodiversity hotspots around the world and the map of language hotspots, places where languages are endangered, it's obvious that many areas coincide. One such area is the Southeast Asian massif, the mountainous region to the south of China where there are over 100 million indigenous or minority peoples.

There is a proven connection between language diversity and biodiversity, and they share the same risks. As the world becomes less diverse, the number of languages in use falls; and vice versa.



Conservation International (conservation.org) defines 35 biodiversity hotspots — extraordinary places that harbor vast numbers of plant and animal species found nowhere else. All are heavily threatened by habitat loss and degradation, making their conservation crucial to protecting nature for the benefit of all life on Earth.

Figure 21. Biodiversity hotspots of the world

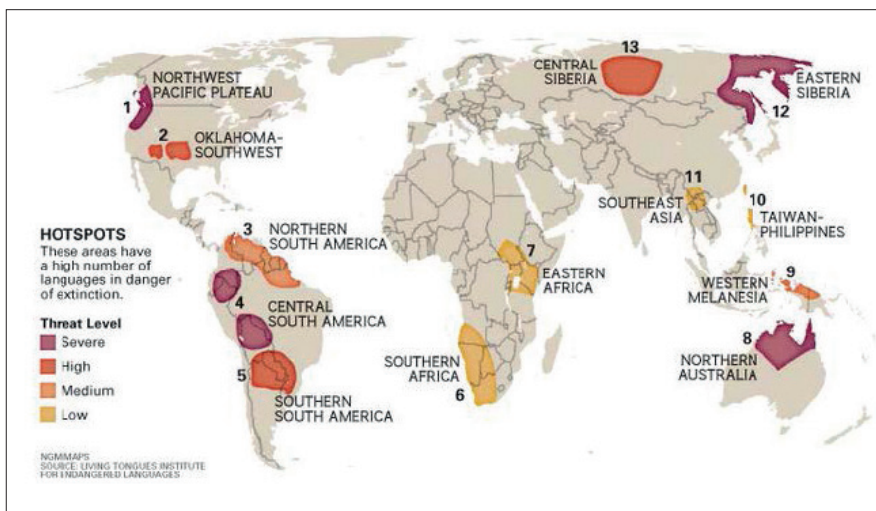


Figure 22. Language hotspots around the world

Knowledge is contained within language. The indigenous peoples who are the caretakers of biodiverse environments speak several languages known by only a small number of people. These languages are vessels that contain their local wisdom about caring for the ecosystem. But these languages are at risk.

How do languages serve as vessels for traditional wisdom? Take an example. The Hmong and Khmu communities who live in Southeast Asia are divided into clans named after fruits and animals. Among our interviewees, one was from the plum clan and another from the civet clan. They are forbidden to consume the fruit or animal of their clan-name. In this kin-centric worldview, the Hmong and Khmu view the surrounding environment as their own kin and family, and treat it with the intimacy that this relationship demands.

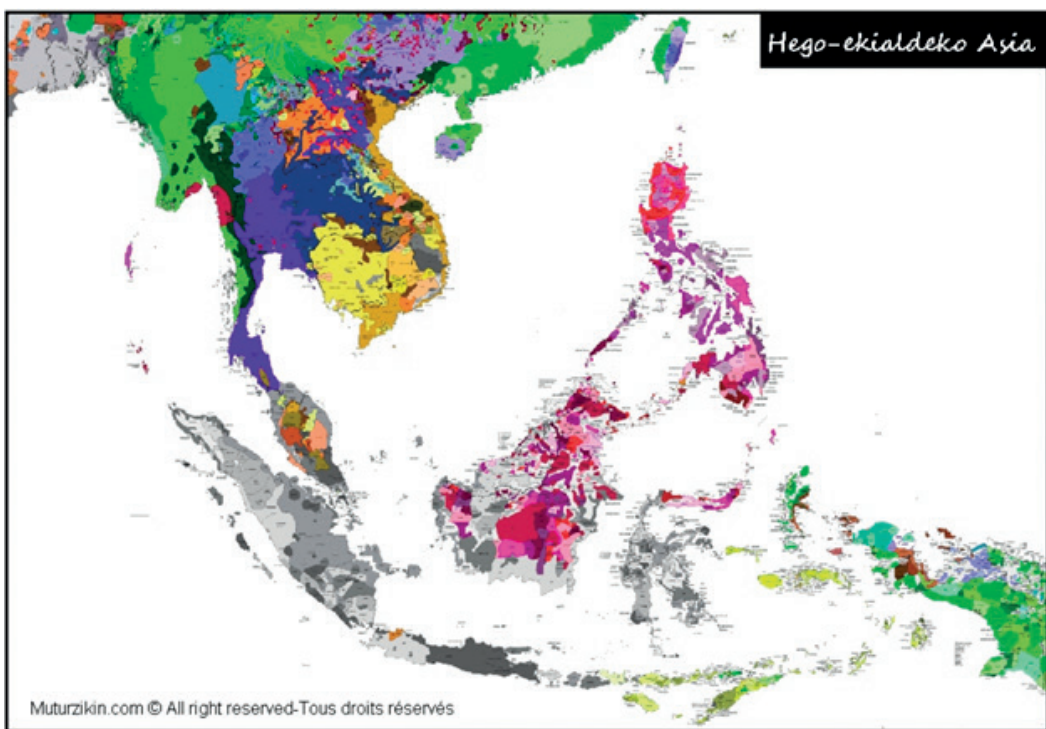


Figure 23. Language map of Southeast Asia

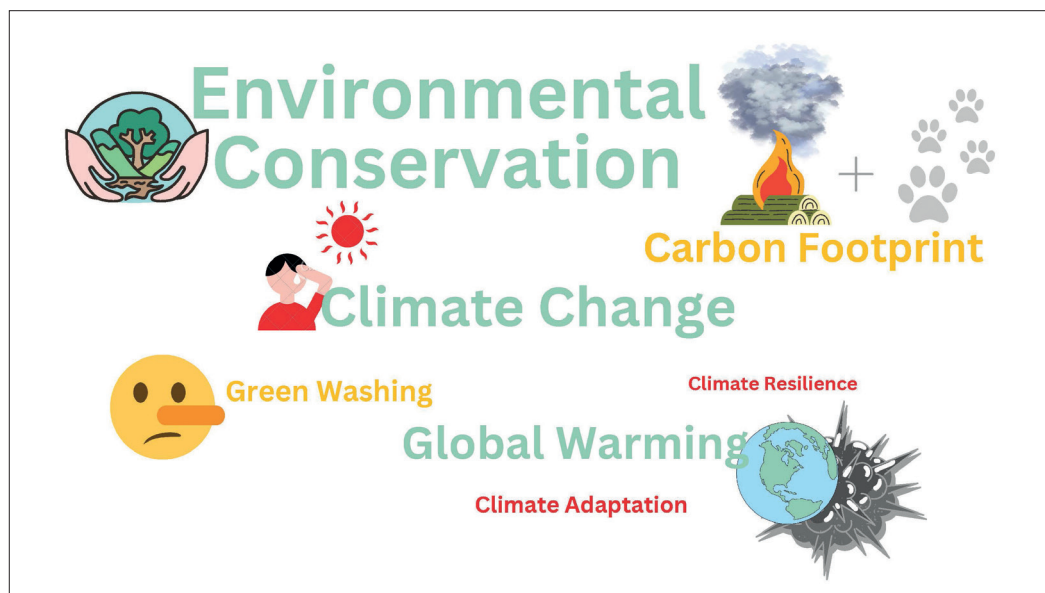
This perspective can serve as the basis for actions to preserve biodiversity and to combat climate change. But language can both connect and disconnect.

There are around 1200 languages spoken across Southeast Asia. Only a handful of these are the mainstream languages adopted as the national languages by the region's countries. Many of the others are neglected. People speaking these other languages lack representation in debate at the national and international level. They rarely appear in academic scholarship. Some knowledge simply has no words in these languages. They have difficulty inserting their local wisdom into debate and policy-making. And at the same time, they have difficulty in getting access to modern knowledge on climate change. This is why language matters in the climate action conversation.



We conducted a small survey among indigenous and minority people about their understanding of some of the basic words and concepts in the debate on climate change. We found that most had words in their language for “environmental conservation” and “climate change” and they understood these ideas well. Their grasp of “global warming” and “carbon footprint” was hazier. They had the essence but needed more elaboration. They struggled over “climate adaptation” and “climate resilience.” Most had no equivalent words and no appreciation of the meaning.

Some of the translations were revealing. The Moken’s word for “greenwashing” is simply “liar,” and the Yhor phrase for global warming is simply “the world is going to explode.”



There are disconnections at many levels. Because climate change cannot be expressed adequately in the local language, these people lack appreciation of the concepts and lack up-to-date knowledge on climate discourse. They can describe how their lives are affected by dam construction, by drought, and by wildfires, but do not connect these to human-induced climate change. As a result, they tend to have a passive attitude towards climate change, and no sense of urgency.

At the same time, traditional wisdom from local communities is not translated into the dominant, mainstream languages. Painfully, this effectively means that centuries of knowledge and wisdom from these communities, who have taken care of these biodiverse environments, are not passed on to the next generation or to people outside those communities.

These disconnections are true even among the Hmong who have relocated to California. Because of limited proficiency in English, they have difficulty understanding their rights, and difficulty contributing to debate.

They also face barriers which go beyond language. They are not given status within the processes of government. They are not embraced as stakeholders on the same level as

others. Typically, they are not consulted on development projects at the planning stages, but only when the plan has been decided and they participate in the implementation.

Their traditional wisdom is not credited with the same status as modern scientific knowledge. Their methods of managing the environment are seen as specific to a certain time and place. They are recognized as “measures that serve the survival of local communities,” without any wider application. These methods are portrayed as different from the universal scientific concepts which are suitable for planning long-term adaptation to climate change.

Their traditional wisdom does not realize its potential to contribute to climate action. And when this knowledge is sidelined, there is a risk that this knowledge will be eroded, and will not be passed on to future generations

How then can local communities get knowledge about climate change and action, and how can their traditional wisdom contribute to the collective effort on climate mitigation? How can all the disconnects be turned into connects?

- Improve translation from mainstream to minority languages, especially for the key scientific and technical vocabulary of climate action. This alone can be empowering.
- Include indigenous and minority communities as full and equal stakeholders from the inception of projects that will affect them. Stop treating them as voiceless minorities with the no rights or status to make themselves heard
- Find ways to integrate traditional wisdom into the debate on climate action. This means (crucially) making policy-makers aware of the value of traditional wisdom. Demonstrate the utility of traditional knowledge on mitigating and adapting to the impacts of climate change. Bring together those who know how to create policy but lack traditional wisdom with those who own traditional wisdom but lack access to the channels of policy-making.
- Invest in the infrastructure that facilitates multilateral knowledge transfer across the boundaries of knowledge, place and status.
- Build bridges where now there are gaps. Connect what is disconnected. Regain what is lost in translation.

Lê Bùi Anh Thơ, Vietnam  
 Kamori Osthanda, Thailand  
 Nazrul Nazri, Malaysia  
 Supitcha Sutthanonkul, Thailand