

Myanmar News Articles from January 2020 to April 2022



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Myanmar: Mekong under threat

The Mekong River Commission (MRC) called for urgent action to protect the river for the benefit of the millions of people throughout Southeast Asia who depend on it. The Mekong is severely impacted by water infrastructure projects and climate change, it said. On March 15, the MRC issued a 174-page report highlighting its major accomplishments and actions taken, and giving key indicators that have raised region-wide awareness of how development and increasingly severe flooding and drought all impact the Lower Mekong River Basin.

“With the vital river now impacted by both water-infrastructure projects and climate change, the new report calls for urgent “water diplomacy” to protect Southeast Asia’s largest river and promote sustainable development for the millions across the region,” the MRC said in a March 15 press release.

The MRC confirmed that these activities have spurred its member countries – Cambodia, Laos, Thailand and Vietnam – to take unprecedented steps along with their two neighbours upriver China and Myanmar. The report recommends that accurate data and scientific knowledge should drive planners and policymakers in their decision-making and execution.

The press release quoted Prawit Wongsuon, chairperson of the Thai National Mekong Committee, as saying: “In the Lower Mekong River Basin, the impact of climate change presents profound implications for the social and economic wellbeing of our constituents, and represents an ongoing challenge for policymakers”.

He said that water diplomacy was increasingly important in the region, particularly with respect to the growing number of hydropower and other water infrastructure projects and development activities. The report cited the specific example of its Regional Flood and Drought Management Centre, which in 2017 was expanded to include drought forecasting. This capability to forecast has since helped to save lives and protect property of the people living in the Basin.

According to the report, one thing that is particularly noteworthy is the improved forecasting, which it said is the product of deepening regional relationships, especially with Beijing. For the first time, China has agreed to share its dry-season hydrological data.

In 2021, the MRC and ASEAN launched the Water Security Dialogue to promote innovative solutions to emerging water security challenges. So Sophort, secretary-general of the Cambodian National Mekong Committee, could not be reached for comment on March 15.

Ro Vannak, co-founder of the Cambodian Institute for Democracy, said the Mekong River is an important source of livelihoods and economic activity in Southeast Asia. The river is home to the world's largest freshwater fisheries industry, and is critical to food security in the region. The Mekong River is a huge biodiversity habitat that provides protein for animals and the more than 60 million people living along it, he said.

URL: <https://www.phnompenhpost.com/national/mekong-under-threat-mrc>

Myanmar: Chinese dams on Mekong River endanger fish stocks, livelihoods

For Pianporn Deetes, the Mekong is more than a river. “This is not just liquid, but this is the entire life-supporting system,” Deetes, a local activist, said recently on a wooden long-tail boat heading upstream in northern Thailand’s Chiang Rai province.

The Mekong, one of the world’s longest waterways, runs about 2,500 miles from its source in the heights of the Tibetan Plateau. Its sinuous path takes it through six countries: China, Myanmar, Laos, Thailand, Cambodia and Vietnam, where it flows into the South China Sea. Tens of millions of people rely on the river, whose name is sometimes translated as the “mother of waters,” for food, water, energy and income. Now Deetes, who calls herself a “child of the Mekong,” is battling to save the river she grew up with. The banks of the fast-moving river are lined with crops, grazing livestock and pontoons for fishing villages. But the fish have been disappearing: The Mekong River Commission — an intergovernmental group made up of Cambodia, Laos, Thailand and Vietnam — estimated that this stretch of river has 40 percent fewer fish than it did 10 years ago.

The Mekong river

Environmentalists and experts blame 11 dams China has built on the Upper Mekong within its borders, which they say are contributing to historic flooding and droughts that have damaged fish spawning areas and upended people’s lives. They say water levels could be further disrupted by another 11 dams — many of them financed by Chinese companies — that are planned for the Lower Mekong, including two that Laos has opened since 2019. “We’re not talking about one or two people or one or two problems,” said Deetes, 42, the regional campaigns and communications director for Southeast Asia at International Rivers, a nonprofit group based in California. “What we are talking about is a large number of people and the regional economy.”

A fishing village in the district of Chiang Saen was nearly deserted on a recent visit, with 18 pontoons for boats but only five fishermen. Singkham Wantanam, 64, has been fishing since he was 12. Once, he made enough money to put his children through college, he said, but now the fish are gone, and so is his livelihood. He said he had caught no fish that day.

“It’s been like this every two or three days,” he said. Environmentalist Niwat Roykaew, 61, lives beside the river in Chiang Khong district. “When the river has problems, the people beside the river have problems,” said Roykaew, the founder of the Rak Chiang Khong Conservation Group,

which has opposed the proposed Pak Beng dam on the Mekong in Laos. “You don’t have the food because you don’t have the fish.”

As for the existing dams in China, Roykaew said, it is important to address how to reduce their negative impact. “There must be discussion on how much water will be released, when it will be released, how it will be released,” he said. China says climate change and reduced rainfall are to blame for the Mekong’s water levels, which the Mekong River Commission says are at their lowest in more than 60 years. Beijing also denies that its dams have caused a collapse in fishing stocks downstream or that it fails to inform other Mekong countries about dam activity. In late 2020, it launched an online platform to share hydrological data year-round. “As the most upstream country, China has always given full consideration to the concerns of the downstream countries,” E Jingping, then the Chinese minister of water resources, said at the time, according to Chinese state media. The Ministry of Water Resources did not respond to a request for comment.

The other Mekong countries, which are dependent on China for trade and investment and reluctant to offend Beijing, have criticized the dams but often struggled to present a united front. Laos in particular has welcomed Chinese investment in hydropower projects as the landlocked country ramps up energy production in hope of becoming the “battery of Southeast Asia.” Cambodia, by contrast, has said it will suspend all work on Mekong dams until 2030.

The tensions over development on the Mekong are gaining more attention regionally and globally, drawing comparisons to China’s territorial disputes with multiple Southeast Asian countries in the South China Sea. Last year, the Mekong River Commission held its first formal meeting about water security with the Association of Southeast Asian Nations, which includes all the Mekong countries except China.

The dams have also become another flashpoint in China’s relations with the U.S., which in 2020 launched the Mekong-U.S. Partnership to counter Chinese influence in the region. There are signs that China, faced with regional backlash, has been trying to revise its approach. Roykaew said he had met twice with senior executives from China Datang Corp., the state-owned power company behind the Pak Beng project in Laos, which would be the northernmost of the 11 new dams. “They came to ask why we didn’t want the dam construction. I explained to them, and they didn’t know how to argue with us,” he said.

China Datang Corp. did not respond to a request for comment; the Pak Beng dam is still poised to begin construction. But Roykaew said he drew hope from Thai activists’ 2020 defeat of a Chinese plan to turn parts of the Mekong into a canal for huge containerships. “I believe China has ears, but when will their ears open up to listen to our voice?” Roykaew said. “I believe one day they will listen.”

URL: <https://www.nbcnews.com/news/world/chinese-dams-mekong-river-endanger-fish-stocks-livelihoods-activists-say-n1288720>

Myanmar: Illegal migrants seek safety, work in Thailand

Thai authorities are continuing their crackdown on people from Myanmar entering illegally despite a worsening humanitarian situation in the war-torn nation ruled by a military dictatorship. Dozens of Myanmar nationals have already been detained this week alone in several Thai provinces as people from the neighboring state continue trying to cross the border illegally in search of employment and safety. Since a military coup last February, Myanmar has been riven by political strife and simmering ethnic insurgencies, causing hundreds of thousands of people to seek their fortune in neighboring Thailand. However, Thai authorities have stressed that all those crossing the porous borders will be detained, charged with illegal entry and deported. More than 68,000 people from Myanmar, including children, were caught between January and November last year, according to migrant rights advocates, although it is widely assumed that hundreds of thousands of people may have entered illegally. Onerous Covid-19 regulations have complicated the process of legal entry into Thailand for people from Myanmar who seek employment in Thailand. “The border has been closed for so long that there is no legal pathway for workers who want to come back to Thailand,” said Roisai Wongsuban, a migrant rights activist. At the same time, people-smuggling networks, allegedly assisted by senior officials in Thailand, have been operating along the two countries’ border to help migrants cross illegally. In just two incidents on the same day, 43 people from Myanmar were detained in the central Thai province of Kanchanaburi after crossing the border illegally on Jan. 8. The migrants said they had each paid between 17,000 baht and 23,000 baht (\$500 and \$680) to job brokers who had promised them employment on entering Thailand.

As a result of such arrangements, numerous migrants end up becoming victimized through a form of bonded labor, which requires them to work in grueling conditions in return for little or no payment until they pay back their debts to the brokers. Despite the prospect of being exploited in Thailand, many Myanmar nationals are willing to take their chances rather than endure privation back home where severe political repression and a stagnant economy have worsened hardships for many citizens, migrant rights advocates say. In recent interviews with rights groups and foreign news agencies, migrants from Myanmar have said that because of worsening economic conditions in their homeland they have been compelled to try and make a living in Thailand where migrant workers account for a large portion of the workforce in several labor-intensive sectors such as food processing, agriculture and fishing. “We could not stay (in our town) ... we had to think about the future of our children,” a 45-year-old migrant from Myanmar told AFP news agency. “We could not stay there because of high prices — we had to leave our village. We came here just to earn money.” In the face of the continued influx of migrants from Myanmar, Thai authorities have stepped up their border control measures. However, a labor shortage in Thailand coupled with desperation by many people in Myanmar to find work in the country means that large numbers of migrants will be seeking to cross over illegally in coming weeks and months, observers say.

URL: <https://www.ucanews.com/news/illegal-myanmar-migrants-seek-safety-work-in-thailand/95666#>

Myanmar: Water quality changes in Indawgyi Lake, some fish species found dead in largest landlocked-area lake

The water quality in the Southern Indawgyi Lake in Mohnyin Township, Kachin State, is changing and some fish species are found to be dying, according to sources from the Fisheries Department. Since December 8, bubbles have been blowing in the bottom and the water becoming muddy. And some fish species have died from a lack of oxygen, said U Myo Nyunt Maung, regional officer from the Fisheries Department. “We see such a situation every year. But different fish species die in different years. This year, most of Labi fish species have died. “Last year, Chaung fish were found dead. In some other years, catfish, carp and spiny eel were found dead. Actually, it is like they are feeling dizzy rather than dying due to the lack of oxygen. Then they are easily caught by fishermen. “According to our study, when outside temperature gets cool, the water volume changes and sulphur comes out from the bottom. “The water turns from green to coffee colour. Indigenous people hold the traditional belief that it is a punishment by spiritual beings.

Such a situation has been experienced for many years. It will worsen this year because of cooler temperature,” he commented. Such a situation comes in Indawgyi Lake every year from December to mid-January, said local resident Ko Zaw Pha Hein, adding that some fish usually go dead. Due to the current situation, a lot of people are catching fish in the lake, and the fish price is just around Ks1,500 per viss. Indawgyi is the largest landlocked-area lake in Myanmar. Its area is 314.67 square miles. Indawgyi Lake is within Indawgyi Wildlife Sanctuary established on March 4, 1999 containing a variety of animal species, including rare mammals and birds, herbs and flowers including rare orchids. UNESCO designated the Indawgyi Wildlife Sanctuary and its surrounding area as a key biodiversity area on June 14, 2017.

URL: <https://www.thestar.com.my/aseanplus/aseanplus-news/2021/12/19/water-quality-changes-in-indawgyi-lake-some-fish-species-found-dead-in-largest-landlocked-area-lake-in-myanmar>

Myanmar: Living in the doomed waters: the story of our little-known Irrawaddy dolphins

Our boat was sailing in the shallows of south-central Bangladesh. Under the bright, baking midday sun, we were constructing an inventory and surveying fishing boats. But the level of frustration was high. We noticed little diversity among pelagic fishes; not a single shark or ray was there. We had brought big lenses, but there were no birds to photograph either. Leaning against the small pilothouse, I was staring at the murky, expansive, hazelnut-coloured estuary of the Bay of Bengal. I was wishing for the dolphins to show up. “A big fish got caught in the net. It is struggling to free itself,”— on my left, someone pointed at something in the waters. I looked in that direction. The sun was against us, and everything appeared like a silhouette. Few long seconds passed by. And, then, I saw it—a full breaching of water, a massive splash, not any fish but a dolphin! Within the next half-an-hour, we experienced a flurry. Everyone rushed to the starboard side, shouting, and bringing out their cameras. The blueish-gray coloured dolphins were catching fish, carefully avoiding fishing nets. They put on a spectacular show. A young dolphin was continuously splashing its tail in a very leisurely manner. This made things easier for us. We checked our excitement, held ourselves steady for the photoshoot. Then a pod of four dolphins came within feet from us. They were Irrawaddy dolphins.

From the coasts to the great rivers

These short-beaked, blunt-headed, short-finned dolphins are versatile. They can sustain in euryhaline conditions ranging from coastal waters to estuaries to rivers. These dolphins are spread across the coast of the Bay of Bengal, the Andaman Sea, and the Gulf of Thailand. Two great rivers in Southeast Asia, the Irrawaddy (from there the dolphin gets the name) and the Mekong, are also a home to them. Apart from the Australian side, they also inhabit the shallow waters of the Indonesian archipelago. The species is present in brackish lakes. A small sound in Palawan marks their easternmost limit. In Bangladesh, they can be mostly seen in the Sundarbans and along the southern extremities of the Ganges-Brahmaputra-Meghna confluence.

Globally endangered, unchecked threats

The International Union for the Conservation of Nature (IUCN) has declared the species endangered. The assessment considered the dwindling number of the dolphins that experienced a staggering 50 percent reduction in population in the last 10 years. Gill netting is their biggest threat. These nets are hung vertically in the water column, drifting freely. As a consequence, these unusually large-bodied mammals get drowned from net entanglement. Apart from gill netting, the dolphins are at the risk of getting hit by propellers of mechanised boats. In the Mekong and the Irrawaddy, these dolphins were once used to hoard up fish for the fishermen—much like the service of a shepherd dog. With the advent of technologies, this mutual relationship had corroded away. Such beliefs are also long lost in Bangladesh. In the past two decades, dolphins of the Asian waters were mercilessly persecuted for meat and oil. Number of dolphin deaths in Bangladesh is experiencing an all-time high. Since 2017, about 300 deaths were noted by ‘Save the Nature of Bangladesh’. The dead-bodies (belonging to multiple species) popped up all over the coasts, from Patuakhali to St Martin’s Island. Several countries take measures to protect dolphins. Gill net usages are banned in Cambodia. In Myanmar, the practice is limited in areas with bans on certain mesh sizes. We do not have any on-field measure to save the dolphins from gill nets, neither there is any official, updated tally of dolphin casualties.

Laos has three, how many we do?

Irrawaddy dolphins are functionally extinct in Laos. In a 2016 survey led by the World Wildlife Fund (WWF), only three individuals were spotted in the Laotian part of the Mekong. On the south of the Mekong, the dolphin numbers hovers just below 100, according to a 2017 study of WWF Cambodia. In the Irrawaddy, 78 dolphins were recorded in 2018 by the Wildlife Conservation Society (WCS) Myanmar. In Palawan, the population estimate stands at 35 individuals. Bangladesh, through publishing their extensive 2006 survey in the coastal waters and the high seas of Bangladesh in the *Journal of Cetacean Research and Management* in 2008, provided an astounding information—about 5,383 Irrawaddy dolphins live in the country. A couple of years ago, another survey of WCS Bangladesh gave us the number of the species in the Sundarbans. There are 451 individuals—says the work featured by the journal *Marine Mammal Science* in 2006. In both cases, the numbers were estimated from statistical modelling on the basis of the systematic surveys. It has been 15 years since the discovery. How many dolphins do we have now? The final report of the Bangladesh Dolphin Action Plan 2020-2030, published in 2019, says that there are about 198 Irrawaddy dolphins in the Sundarbans. The number came

from a survey of 1340 km of rivers within the mangrove. 30 more individuals were found in the rivers around Barguna and Patuakhali.

The draft Nijhum Dwip Marine Reserve Management Plan 2019-2034 mentions about 93 Irrawaddy dolphins in the Nijhum Dwip waters. The report also states two more statistics. WCS Bangladesh, based on the 2017-18 and the 2018-19 survey, found a total of 485 Irrawaddy dolphins. Undoubtedly, Bangladesh holds the largest population of this species. But has the number decreased over the years? Or did the model give us an inflated number? Where did all the dolphins go? “This discovery gives us great hope that there is a future for Irrawaddy dolphins. Bangladesh clearly serves as an important sanctuary for Irrawaddy dolphins,” said Dr Brian Smith, the lead author of the 2008 study and the pioneer of dolphin research in Bangladesh stressed, to Mongabay. The dancing dolphins left us after a while. As our boat had moved forward, the horizon became dotted with the boats, the surface appeared beaded with the floats of deployed gillnets. The waterscape transmitted a tension between life above and below. Where do the dolphins belong in this synergy?

URL: <https://www.tbsnews.net/environment/nature/living-doomed-waters-story-our-little-known-irrawaddy-dolphins-321475>

Myanmar: Indigenous understanding of Salween River key for biodiversity

This week, governments from around the world will convene online for the first part of the UN Biodiversity Summit COP15 (the second part will convene partially in-person in Kunming in spring), which will agree on the post-2020 Global Biodiversity Framework. Framed as a ‘stepping stone’ to the 2050 Vision of ‘Living in harmony with nature’ as part of the Convention on Biological Diversity (CBD), ratified by 196 countries, this framework is intended to deal with runaway biodiversity loss over the next decade. Increased attention is being paid to how Indigenous Peoples have for centuries realised this aspiration of harmony. Indigenous Peoples manage or have rights to 22% of the world’s land, yet this land supports 80% of the world’s biodiversity, even as they struggle to regain ancestral lands that were taken from them in many places. What is less recognised is how Indigenous understanding and perception of reality upholds this harmony.

The CBD meeting three years ago promised greater inclusion of Indigenous Peoples and traditional knowledge, and there is much discussion of these issues ahead of COP15. The CBD developed the Akwé: Kon Guidelines in 2004 and further deepened involvement with the launch of a Traditional Knowledge Information Portal. Despite this progress, when mainstreaming of biodiversity into the energy sector was discussed by CBD parties in 2017, the negative impacts of hydropower dams were discussed in biodiversity and ecosystem terms, paying mere lip service to Indigenous rights. A narrowly technical understanding of hydropower – passed off as “scientific” – underestimates how culture supports economies, conservation, and utility for Indigenous Peoples living in river basins. When external experts interpret Indigenous knowledge without context of Indigenous perception of reality (ontology), they fail to grasp its importance. What is needed is an incorporation of Indigenous understanding of reality when discussing biodiversity in Indigenous territories, in order to manage ecosystems better.

The Salween through Indigenous eye

The Salween River is one of the few major rivers in Asia who still flows freely and uninterrupted by large-scale dams. Roughly 2,400 kilometres long, the Salween flows from the Tibetan Plateau through Yunnan into Myanmar, briefly touching Thailand. The Salween supports some of the most biodiverse areas in the world and is home to diverse Indigenous groups including the Akha, Blang, Derung, Hmong, Kachin, Karen, Karenni, Kokang, Lahu, Lisu, Mon, Nu, Palaung (T'arng), Pa'O, Shan, Tibetan, Yao, and Wa. As custodians of the Salween River, community members maintain a spiritual relationship with the Salween, as our ancestors have done since they descended from the Tibetan Plateau many centuries ago. For us, the Salween is home to countless important spirits who are intermediaries between our human societies and the environment around us. She supports the sacred animal and plant species who populate our cosmos and carries the memories of our ancestors whose lives were intertwined with the river. Our relationship with the spirits is maintained and the memories of our ancestors kept alive by our continuous interaction with the Salween River. She is the backbone of our traditional knowledge and practices. This is a wider understanding of the river than a mere provider of 'ecosystem services' which sustains our 'livelihoods'. In our Indigenous understanding and perception of reality, developed over generations of living in the Salween basin, we don't make a distinction between plants, animals, humans, and more-than-humans such as spirits and ancestral spirits. This interconnectedness remains strong because the Salween is a free-flowing river. These connections are reflected in Indigenous land, water, and natural resource management across the Salween basin. As has been noted with reference to the Htee K'Sah guardian spirits of the water in S'gaw Karen ontology in the journal *Pacific Conservation Biology*, "Karen environmental governance consists of social relations and ceremonial obligations with more-than-humans... It is through relations with the K'Sah that Karen villagers relate to the water and land itself, and humans' rights to use the land are contingent on maintaining these ritual obligations."

Indigenous knowledge systems lead to better conservation

Our customary water governance traditions include stewardship practices, hunting and fishing restrictions, and ceremonial protocols that have fostered harmony with nature and safeguarded biodiversity. Our river is inhabited and protected by guardian spirits. In sanctuary areas, prayer ceremonies are performed to protect the fish and harm those who fish there. Our traditional watershed management systems designate ecologically sensitive areas such as ridges, watersheds, and old growth forests, where the cutting back of forest is prohibited. The benefits of traditional knowledge and practices for biodiversity thus come from the cultivation of a harmonious relationship between humans and more-than-humans, which is why sacred areas – an old tree or an entire mountain or river – must be protected. The ongoing relevance of such traditional knowledge and practices can be seen in the Salween Peace Park, an Indigenous initiative in Karen State which was awarded the 2020 UNDP Equator Prize. Around 75% of the forests, mountains, and rivers that constitute the 1.4-million-acre area is managed according to traditional 'kaw' customary knowledge that combines spirituality, culture, and conservation. This combination characterises Indigenous knowledge and is at the heart of Indigenous identity even when people have adopted 'formal' religions. Indigenous knowledge and practices that are

beneficial for biodiversity cannot be separated from Indigenous understanding and perception of reality. The inseparability between Indigenous ontology, Indigenous knowledge, and Indigenous practices is hard to recognise for people living outside these ontologies. It is not possible to capture or preserve our Indigenous knowledge in a museum or a book. What meditation and prayer in a house of worship is for other religions, for us is the interaction with the Salween River. Our knowledge regenerates from our interaction with our environment, especially at the countless natural sacred sites and auspicious confluence points where the Salween meets its tributaries. We see her as a living entity.

Uninterrupted interconnectedness is key for the Salween

There are plans for seven Chinese-built dams along the Salween River, which has been a source of friction between Myanmar and China, as well as the current and previous governments and Indigenous groups. If the Salween River is dammed, it will strike at the heart of our cultures and beliefs. The severance of the river itself and the cascade of consequences will be the death knell for our traditional knowledge and practices for three reasons. Firstly, the Salween responds to seasonal snowmelt and monsoon rains. Altering these variations in her flow affects the river's ecology, severing people's interdependency with the river by causing a decline in local river-linked livelihoods such as fisheries and agriculture. If these are disrupted, young people will have no choice but to take up professions disconnected from the river or move away. Less interaction and cohabitation with the river over time weakens Indigenous knowledge systems. In the Karen context, Lu Htee Hta is one of the most important ceremonies performed as part of our relationship with the water, a 'founders' ritual' which maintains a social contract with the more-than-human owners of the water and land. If the next generation is not able to conduct these rituals, the social contract will be broken. Without the continuous interactions between animals, humans, and non-humans in the Salween basin, Indigenous knowledge will cease, and with it practices that have sustained the rich biodiversity we see today. Secondly, dam-induced changes to the river's rhythms, levels, and nutrition will reduce the numbers and ranges of many sacred aquatic species that are strictly protected in the traditional management systems of the Salween, including the fish Nya Moo, Nya Ter Taw, and Nya Pla (*Neolissochilus* sp.). For instance, a reddish species of Nya P'tay is regarded as the king of all fish and killing them, we believe, will result in the extinction of fish species and water scarcity and drought. The Salween is home to a diversity of turtles greater than any other river in the world, and a number of them we regard as sacred.

Mainstream dams will also affect river-based sites considered sacred, such as the Thawthi Kho watershed area, threatening the effective protected status of waterbodies rich in biodiversity such as spring-fed pools, mud beds, waterfalls, rapids, and islands. If these sacred natural sites run dry or flood in unusual ways, people will believe that the spirits may become angry and cause accidents and illness in nearby communities, or leave the river altogether, stripping these sites of protection. Third, if our Salween is fragmented by dams, this will disrupt the flow, interconnection, and relationship between all beings that depended on it. This upsets the balance in the river, which in turn upsets the balance between the river, humans, and more-than-humans. It is the wholeness of the river – connecting beginning to end; past to present; humans to more-than-humans – that makes her the backbone of our belief systems. This gives her a sacred meaning as an indivisible living entity that supports our Indigenous cosmos.

Recognition and action for Indigenous ontologies

We draw hope from recent developments that have seen the central importance of free-flowing rivers in Indigenous ontologies being increasingly recognised, including by parties to the CBD. In 2017, New Zealand acknowledged the sacred status of the Whanganui River in Maori ontology by giving the river legal personhood. Through this act, New Zealand recognised the Whanganui as “an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating its tributaries and all its physical and metaphysical elements”. New Zealand acknowledged “the enduring concept of Te Awa Tupua – the inseparability of the people and the River” thereby echoing the ancient Maori proverb: “The Great River flows from the mountains to the sea. I am the River and the River is me.” According to the New Zealand Attorney General in charge of the process, their most difficult challenge was getting the country’s European-descendant majority “to see the world through Maori eyes.” While rivers have since been recognised as living entities in CBD member countries such as Ecuador, Bangladesh, and Canada, many other CBD members are still severing the flow of rivers sacred to Indigenous Peoples. In our own country, Myanmar, the military junta recently announced a fresh push to dam the Salween River. Participants at the COP15 of the Convention on Biological Diversity should move beyond previous calls for ‘participation by’ and ‘consultation with’ Indigenous Peoples to recognise ontological diversity in order to safeguard biodiversity in Indigenous territories. To play an effective role in addressing the biodiversity crisis, we have to be able to sustain our own ‘Ecological Civilisation’. Parties to the CBD should consider legislation that recognises legal personhood and rights of rivers considered sacred to Indigenous Peoples and incorporate Rights of Nature into the post-2020 Global Biodiversity Framework. Parties should also translate the Akwé: Kon Guidelines into their national laws so that these guidelines become more relevant. Through enabling more research into Indigenous ontologies and their spiritual relationship with rivers, the CBD Secretariat should help to foster a better understanding of who a river is in the ontology of Indigenous Peoples. Above all, parties to the CBD should, in their effort to mainstream biodiversity in the energy sector, commit to excluding large-scale hydropower as an energy option for rivers such as the Salween which are sacred and culturally significant to Indigenous Peoples.

URL: <https://www.thethirdpole.net/en/culture/indigenous-understanding-salween-river-key-biodiversity/>

Myanmar: China joins Lower Mekong River countries to study impacts of climate change, dams

China and the countries of the lower Mekong River are teaming up for their largest joint study yet of the impacts climate change and hydropower dams are having on one of Asia’s great waterways, and how to cope with the growing threats from floods and drought. On Tuesday, the Mekong River Commission — an intergovernmental body comprising Cambodia, Laos, Thailand and Vietnam — announced a three-year study spanning the entire river basin, in tandem with Myanmar and the China-led Lancang-Mekong Cooperation Water Center, or LMC. Lancang is China’s name for the Mekong. From its headwaters in China’s western highlands to its delta on

the South China Sea, the Mekong courses over 4,000 kilometers through Myanmar, Laos, Thailand, Cambodia and Vietnam, supporting the livelihoods of 60 million people along the way. A decade of increasingly erratic weather and ever-multiplying dams spanning both the river's mainstream and its tributaries have stifled the seasonal cycles of the Mekong that those millions rely on, said Anoulak Kittikhoun, the commission's chief strategy and partnership officer. "So, there is a need to reassess the situation, and what's important is that the MRC cannot do that alone," he told VOA. "We need to cooperate with upstream countries, especially China and the LMC framework in order to have a common understanding about this change, and then to find out what immediate actions can be done in terms of coordinating the operation of the water infrastructure, as well as communication and notification mechanisms."

Devil in the details

The commission says the partners will formally launch the joint study in December, marking their largest collaboration yet by drawing on data from 1985 through 2019 at least, and not only from the Mekong's mainstream, the MRC's usual remit, but its main tributaries as well. They will look at data from more than 30 years in two sets: one from 1985 to 2007, and another from 2008 onward, the latter capturing the main dam-building period. Anoulak said the split should give them a better idea of just what impact the dams have had on the river. That has been a major point of contention between China and those who blame the record 11 dams it has built across the mainstream for much of the decline in downstream fish stocks and the sediment flows critical to floodplain farming. When U.S. climate research firm Eyes on Earth, after analyzing satellite data, said last year that the dams' massive reservoirs had worsened a devastating 2019 drought in the lower Mekong basin, China rejected the claim. Many of the details of the study have yet to be worked out, from exactly which tributaries to focus on to how much data China will share on how it operates its dams. To date, China has refused to reveal how much water its dams release. Anoulak said much of the study's success will hinge on how much operating data China and the other countries are willing to disclose.

"This is one of the keys to this study. In order to have the study recommend good measures for how the flow regime should be managed and how we can come up with adaptation measures, some of this data would need to be shared," he said. More data from China on how it runs its dams will be vital to a full understanding of their effects on the lower Mekong and for any meaningful planning on how to best manage the river for the benefit of all, said Brian Eyler, Southeast Asia program director at the Stimson Center, a U.S. think tank. "If this study is done right, then China will open up the books on how its dams have been operated from their point of commissioning or point of the reservoirs' filling," said Eyler, who also co-leads the center's Mekong Dam Monitor project. Sharing that data would mark a sea change for China, he added, and whether it does so "remains to be seen."

Adapt vs. abate

Eyler welcomed the study's embrace of dams on the Mekong's many tributaries, which his own research suggests have a cumulative impact on the basin equaling that of those on the mainstream. He said he is concerned, though, that China could use the collaboration as an opportunity to push the narrative that its dams' disruption of the Mekong's seasonal flood cycle

actually helps downstream countries, despite a lack of evidence, and that some MRC officials make similar claims. “Those forces could unite to further engineer the Mekong River system in a way that makes it harnessed, overmanaged and overengineered,” Eyler warned. “And we know what the outcome of that process looks like. It looks like ecological breakdown in the Mekong, nearly entire loss of fisheries productivity, huge impacts on Vietnam’s agricultural productivity and a large decrease in resilience of the Mekong delta to defend itself in the face of coming climate change impacts.” South of China, another 11 dams are either operating, under construction or in the planning phase on the mainstream alone, most of them in Laos. Dozens more straddle the river’s tributaries. Marc Goichot, Asia Pacific freshwater lead for the World Wide Fund for Nature, said he wonders whether the ultimate aim of the study is to merely help the Mekong countries mitigate harmful effects and adapt to them, or to avoid those it can and tackle the root causes.

Anoulak and the MRC’s brief statement on the study referred more to mitigating and adapting, and to building better dams, rather than not building them. Goichot, who is based in Vietnam, said he also is struck by the lack of any mention of sediment — the silt, soil and sand rivers pick up along their course and deposit downstream. Farmers depend on those deposits all along the Mekong, but nowhere more so than in the Mekong delta in the south of Vietnam, the country’s rice bowl. The delta has been sinking and shrinking for a lack of sediment for years, compounding the risks of rising sea levels and the fears of a coming exodus out of the densely populated area. “It’s the place that’s most exposed to droughts and floods, and that’s very relevant to hydropower because basically the delta is sinking much faster than sea levels rise, and sinking is attributed to some part, [an] important part, to the fact that the sediment from the Mekong has been reduced, and the dams are one of the key reasons, if not the key reason for why sediment has reduced so much,” Goichot said. “For me I would have expected this to be front and center already at this stage in the study, and it is not,” he added.

URL: <https://www.voanews.com/a/china-joins-lower-mekong-river-countries-to-study-impacts-of-climate-change-dams-/6244149.html>

Myanmar: MRC to lead joint study of Mekong River Basin

The Mekong River Commission (MRC) and its dialogue partners will undertake a major joint study by all six Mekong countries into the changing hydrological conditions across the entire Mekong River Basin, which has suffered from severe drought. The annual 25th Dialogue Partners meeting, which includes the MRC and representatives from China and Myanmar, approved the joint study alongside the Lancang-Mekong Cooperation (LMC) Water Centre. Phonepaseuth Phouliphanh, acting chairperson of the MRC Joint Committee, said the study would propose adaptation measures, including better information sharing and the coordination of water infrastructure, to address flood and drought risks and water fluctuations. “The need for the joint study is underscored by the Mekong River Basin’s increasing propensity for floods and droughts that have been attributed to adverse changes in climate and water infrastructures,” he said in a statement. The Mekong River has struck record lows in recent years with scientists and environmentalists pointing to climate change and dam construction in Laos and China as

significant factors which have resulted in water shortages and depleted fish catches. More than 60 million people depend on the river for their livelihoods.

The MRC said the study would be launched in December and run until 2024. It consists of two phases, with the first to be completed in 2022 and expected to yield immediate recommendations for action. A second phase, running between 2023 and 2024, will be implemented in coordination with the MRC's Strategic Plan 2021–25. The MRC noted that countries along the Mekong River such as Myanmar, Vietnam and Thailand are among the top 10 countries in the world exposed to significant climate change risks, according to the Global Climate Risk Index. Droughts in the basin had increased in frequency and severity since 2009, the MRC said. It said these events severely hit rural livelihoods, curtailing productivity which resulted in huge economic losses. Additionally, the river's hydrological regime has changed following development of the hydropower cascades in the Mekong Basin and climate change. "China welcomes stronger synergy between the MRC and LMC to better contribute to the well-being of people and the sustainable development in the subregion," said Ke Yousheng, China's permanent representative to the United Nations Economic and Social Commission for Asia and the Pacific. The dialogue meeting also discussed a mechanism of joint notifications of water-related emergencies including water fluctuations, flood and drought among the six Mekong countries. Since 2019, the MRC has monitored changes in flow regimes which have caused water fluctuations. In response, it said, the MRC would table their findings to be discussed with the remaining MRC countries — Cambodia, Laos, Thailand and Vietnam.

URL: <https://www.ucanews.com/news/mrc-to-lead-joint-study-of-mekong-river-basin/94234#>

Myanmar and Bangladesh: Strengthening Myanmar's trade relations with Bangladesh

Myanmar is one of Bangladesh's closest neighbors with historic connectivity going back centuries. The 271 km long Bangladesh-Myanmar border is very important for Bangladesh due to its strategic position, although at present the area is militarized due to its ongoing internal conflicts. Were this to be resolved, Bangladesh could develop routes via Myanmar to access China to the east, and other southeast Asian countries to the south. Myanmar can also use Bangladesh as a transportation route to reach markets such as Nepal, Bhutan, and India. Both Bangladesh and Myanmar are members of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), an organization consisting of Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand that seeks to foster regional and economic cooperation. Bangladesh is a Southeast Asian country and can be used as an important hub to connect ASEAN and the South Asian Association for Regional Cooperation (SAARC) members of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka is difficult. Myanmar too, as an ASEAN member, can access the SAARC free-trade bloc through Bangladesh.

Cooperation in trade and energy

There are other routes to bilateral cooperation. Myanmar is rich in natural resources such as tin, zinc, copper, tungsten, coal, marble, limestone, natural gas, and hydropower, etc. Myanmar

could thus be a major source of energy for Bangladesh to ensure its energy security. Furthermore, grains such as rice are produced in large quantities in Myanmar which can also be exported to Bangladesh. Rice production in the country accounts for approximately 43 percent of its total agricultural production, making it the seventh-largest producer of rice in the world. Out of 67.6 million hectares of land, 12.8 million are used for cultivation. In 2019 alone, Myanmar accounted for 13,300 million metric tons of milled rice production. Rice production in Myanmar is heavily dependent on the traditional methods of cultivation.

Myanmar is also a large producer of agricultural products. During Bangladesh's onion crisis with India in 2019, Myanmar provided onions to Bangladesh. Bangladesh understood the importance of bilateral trade with Myanmar at that time. If Bangladesh improves its relations with Myanmar, its dependence on India could be reduced and could increase trade with other countries in Southeast Asia. Myanmar is also a major supplier of natural wood to the world. While attracting foreign investment has been limited to the oil and gas sector, the country has recently shifted its focus to attracting production-based investment. The country is well ahead in power generation due to good investment in hydropower generation. The tourism industry is also a promising sector of the country.

Through the import of gas and electricity, Bangladesh can obtain its future energy security. The two countries can jointly explore oil and gas fields in the Bay of Bengal. Bangladesh can also contribute to the development of Myanmar's infrastructure. Both countries have also resolved a dispute over their maritime borders through the International Court of Justice. As a result, the rights of Bangladesh have been established in an area of 11,000 square kilometers. Myanmar's waters have also been properly identified. The proposed construction of the Asian Highway, funded by the Asian Development Bank can increase land connectivity between the two countries and increase trade in products such as fertilizers, plastics, cement, and furniture, etc. Myanmar, which at present does have sophisticated manufacturing, can import electronics and pharmaceutical products that are readily produced from Bangladesh and benefit from the technology transfer.

China and ASEAN

China is now the biggest investor in Myanmar. China has invested over US\$3 billion since the 2016-2017 fiscal year. One of the most strategic components of these investments is the US\$1.3 billion Kyaukphyu deep seaport, which when completed, can provide China's Yunnan province a shortcut to the Indian Ocean. The country's biggest economic advantage for Myanmar is that they are a member of ASEAN. ASEAN controls about 24 percent of total world trade and its share in world trade is growing yearly. ASEAN's trade relations with China, Japan, and South Korea are deepening due to the increase in trade and the upcoming RCEP agreement. ASEAN countries account for more than 50 percent of total trade between themselves and these three countries. Bangladesh is keen to provide assistance to Myanmar. Covid-19 vaccine distribution and counter-terrorism training are some areas for cooperation. The Rohingya refugee problem has, however, created some tension between the two countries, and find the solution can serve the longer-term interests of Bangladesh and Myanmar.

URL: <https://www.aseanbriefing.com/news/strengthening-myanmars-trade-relations-with-bangladesh/>

Myanmar: Addressing climate change in the Mekong-Ganges region

Following the 11th Mekong Ganga Cooperation (MGC) meeting on July 21, the foreign ministers of the MGC's six member countries (Cambodia, India, Laos, Myanmar, Thailand, and Vietnam) agreed on the need to increase cooperation on sustainable water resource management. The ministers pledged to enhance technical cooperation in water resource management, share experiences, enhance human resource development, and improve the capacity of integrated water resource management systems. The need to prioritize climate change-related issues in the Mekong-Ganges basin was first addressed in the 10th MGC ministerial meeting, in which the foreign ministers decided to focus on climate change as a new area of cooperation, particularly stressing water resource management as the starting point. According to the MGC plan of action adopted in 2019 for 2019-2022, steps regarding climate change were to be followed by undertaking collaborative projects in the areas of climate change adaptation, flood and drought management, disaster mitigation, and water resource management. India for its part offered to organize trainings and workshops for MGC countries' professionals at the National Institute of Rural Development and Panchayati Raj. This marked a fundamental change for the MGC, whose initial purpose, when it was formed in November 2000, was to focus on four traditional areas of cooperation: tourism, culture, education, and transport and communications. The newfound attention to climate change might be a recent development, but it is a necessary one. The shift at the MGC has come at a crucial time, when the immediate effects of climate change are increasingly being seen throughout the world, with the Mekong-Ganges region no exception.

According to a study mentioned in the Asia-Pacific Disaster Report 2017, the Asia-Pacific region, which includes the MGC countries, is at a higher risk of climate change-related casualties and economic losses for the period of 2020 to 2030. The report estimates that 40 percent of global economic losses due to disasters will be incurred by countries in the Asia-Pacific. Furthermore, the report highlights the fact that since 1970, approximately 2 million people in the Asia-Pacific have died as a direct result of natural disasters, representing 59 percent of the global death toll. Though the principal causes have been earthquakes and storms, water-related incidents are increasingly becoming a prevalent cause of fatalities. In 2018, floods disrupted life in countries such as Afghanistan, China, North Korea, India, Japan, Laos, and many others in the region. In fact, almost half of the 281 natural disasters in 2018 happened in the Asia-Pacific, including 10 of the deadliest incidents. Given the wide ambit of risk associated with natural disasters, an increasing number of people in Asia and the Pacific now fall under the category of "affected": people who require immediate assistance during a period of emergency i.e., basic survival needs such as food, water, shelter, sanitation, and immediate medical assistance. Climate change has especially been a concern for the Lower Mekong River basin countries: Cambodia, Laos, Thailand, and Vietnam. An increase in temperatures along with changes in the intensity of rainfall and river flows, and a pattern of floods alternating with droughts are all impacting the lives of communities residing on the basin, destroying their homes, crops, and fisheries, and creating food shortages along with a decrease in livelihoods.

According to research conducted by the Mekong River Commission (MRC), the next 20 to 50 years will see a wide number of changes marked by an increase in temperatures across the Lower Mekong basin. By 2060, it is estimated that the average annual temperature rise in the basin region would reach well over 3.3 degrees Celsius, with the change in rainfall under a dry climate scenario to fall by 16 percent and under a wet climate scenario to increase by 17 percent. Unpredictable weather patterns lead to a whole range of issues. One example is crop failure, which decreases the domestic supply of food grains, thereby increasing food prices and straining government resources. Moreover, the risk of disease also increases thanks to climate change, which can disrupt decades of development gains in a short amount of time. Along with the Mekong River basin, the Ganges River also has been negatively impacted by climate change. The Ganges is a major river supporting millions of people, not just in India but also in Nepal and Bangladesh. As mentioned by C.K. Jain and Surya Singh, mixed patterns of precipitation due to climate change are going to cause both heavy floods and extreme droughts as a result of higher rainfall and higher temperatures. This will have a significant impact on habitats and communities along the Ganges River ecosystem. From 2002 to 2008, water levels in the Ganges basin have declined by an average of one meter every three years. This decline in water levels will be made worse by the continued growth in India's population, which is estimated to increase to 1.6 billion by 2050. An increase in population will necessitate the need for rapid urbanization, which will further stress the Ganges River with increased demand for water.

For all the Mekong countries, climate change is among their top three security concerns. According to the ISEAS-Yusof Ishak Institute's Southeast Asia Climate Outlook: 2020 Survey Report, 52.7 percent of respondents (including those from Mekong countries) considered climate change as a serious threat, posing immediate challenges to the well-being of the region. Furthermore, above 90 percent of the respondents of the Mekong countries felt that the private sector should play an important role in tackling climate change by adopting green practices. As for the public response in India, the Climate Change Asia report 2013 revealed that over 50 percent of Indian respondents were informed about climate change and its adverse effects. The Mintel Sustainability Barometer 2021 also concluded that overall 48 percent of Indian respondents were concerned about climate change, with 78 percent of those having listed deforestation, loss of biodiversity, and chemical spillage as among the top environmental concerns. In the case of the respondents from the Mekong-Ganges region, it should be pointed out that tangibility plays a crucial role in public perception of climate change. A growing number of people understand global warming mostly through their daily lived experiences and changes to their immediate surroundings. This in no way negates their experience about climate-related issues or their expectations from the government to address issues that directly impact their lives. In fact, citizens of the MGC countries feel that government should do more in taking concrete steps to address the challenge of climate change, as highlighted in the aforementioned surveys. The focus of the MGC Ministerial Meeting on sustainable water resource management and climate change has therefore become a crucial and urgent area for cooperation on these issues. MGC countries can take this opportunity to increase awareness of climate change with their citizens and at the same time build trust by taking relevant steps that address the climate issues in the Mekong and Ganges region.

URL: <https://thediplomat.com/2021/08/addressing-climate-change-in-the-mekong-ganges-region/>

Myanmar: FAO and the European Union promote small-scale inland aquaculture schemes to save livelihoods and enhance food security in Rakhine State

In Rakhine State, on the west coast of Myanmar, more than 80 percent of the population live in rural villages and depend on agriculture, fishery and aquaculture as primary sources of livelihoods. A protracted conflict has continued to drive displacement and disrupt livelihoods since 2012. Compounding the situation is the vulnerability of the region to floods, cyclones and earthquakes. Every year, extreme weather events such as heavy rains, mudslides and floods hamper rice production in low-lying areas that are often inhabited by the poorest members of the community. Consequently, more than 40 percent of households in Rakhine State are food insecure. With the objective of restoring the livelihoods and enhancing the food security of the most vulnerable communities in Rakhine State, FAO, with the support of the European Union, rehabilitated 60 fish ponds and constructed 37 new ones in Buthidaung and Maungdaw Townships, directly benefiting 97 households. Each beneficiary household received aquaculture training as well as a package of inputs, including materials for bamboo fencing, nets, 900 fish fingerlings and three months' supply of rice bran.

FAO conducted the construction and rehabilitation activities of the fish ponds through cash for work (CfW) to support the targeted communities in meeting their immediate household needs and reduce their adoption of negative coping mechanisms. A total of 878 CfW beneficiaries (25 percent Rakhine and 75 percent Rohingya) participated in CfW activities. Each CfW beneficiary worked for an average of nine days and earned USD 56. To prevent the spread of the coronavirus disease 2019, all beneficiaries of CfW activities received face masks and prevention information was communicated through orientation sessions, posters and leaflets. As a result of the intervention, each beneficiary household will harvest up to 450 kg of fish per year which will be used for household consumption and sell excess supply in the local market to generate income. This will significantly contribute to improving households' food security and strengthening their livelihoods resilience.

URL: <https://reliefweb.int/report/myanmar/fao-and-european-union-promote-small-scale-inland-aquaculture-schemes-save>

Myanmar: Why Country's junta is likely to ignore the opposition to Chinese dams on Salween river

Plans for seven Chinese-built dams along the Salween River have been a source of friction for Myanmar and China for some time. Prior to the military coup on February 1, the elected party the National League for Democracy and grassroots campaigners were already locked in conflict. International isolation following the coup may now force the government to move closer to China than it would like, leaving indigenous groups more at risk. The future of dam building is now in the hands of General Min Aung Hlaing's military regime. Last week, he met with State Administration Council members and departmental officials in Hpa-an, the state capital of Karen. Along with repeated claims of election fraud, he said that the Hatgyi hydropower plant

will be built. He said nothing of the environmental concerns, only that “those objecting [to] the project for various reasons should understand the benefits.” In response, Saw Kyaw, brigadier general of the Democratic Karen Buddhist Army, told news website The Irrawaddy: “The entire Karen population oppose the dam. Peace has gone in the area now. If the hydropower project is to be implemented, only our people will suffer.” The Salween remains Southeast Asia’s longest free-flowing river in a region that has seen frenzied dam-building on the Mekong, upper Yangtze and other major waterways. It flows 3,289 kilometres from the Tibetan Plateau to the Andaman Sea near Myanmar’s border with Thailand. In China, it is known as the Nu River. Crossing into Myanmar, the Salween, or Thanlwin, snakes through ethnic minority lands in Shan, Kayah, Karen and Mon states. It is an artery for immense biodiversity, providing sustenance for millions of people in Myanmar’s conflict-ridden regions. The Hatgyi and Mong Ton dams are among the largest of seven mainstream dam projects planned by Chinese and Thai companies on the Salween. The 7,000-megawatt Mong Ton dam in Shan state is sponsored by Thailand’s EGAT and China Three Gorges Corporation, and could become Myanmar’s largest dam. Both Hatgyi and Mong Ton are in the planning stage. They would inundate land that is now home to villagers displaced by conflict in the late 1990s who have been unable to return. The Mong Ton site alone would displace at least 60,000.

Civic protesters silenced

The Save the Salween Network previously organised community resistance along the length of the river, using the International Day of Action for Rivers, March 14, to amplify the opposition of different regions and ethnic groups in a unified protest. This year, activists along the upper and mid-reaches of the river in Shan state could not hold public events on March 14. “In Karen state, the organisation was able to campaign, as it was in the area controlled by KNU [Karen National Union, a political organisation]. In southern Shan state, that would be too risky,” a spokesperson from Save the Salween Network told The Third Pole. The military coup has brought internet connectivity restrictions, a ban on international money transfers and continuing violence. Save the Salween Network continues to advocate for the river in whatever small ways remain. “Because we are not registered in the official registry, our... organisation is in a better position than others. We are off their radar. Despite this, I am in hiding,” the spokesperson said. Air strikes have been carried out in the Salween Peace Park, a grassroots conservation and indigenous people’s initiative. In March, Myanmar’s military launched the first air strikes on KNU territory in 20 years after rebels killed 10 soldiers, Reuters reported. Attacks continued through April and May, killing dozens and forcing thousands to flee. The military government has persisted in its claims of election fraud to little effect. Protests and violence continue across the country in the form of attacks on military positions and assassinations.

Waters rising

The current violence builds on disaffection between ethnic groups and the now-overthrown civilian government. “The NLD was so close to China and they did not share any information on any of the pursued projects,” so “ethnic people lost trust in this party,” the Save the Salween Network spokesperson said. However, he said he expects the military to continue the dam projects, “not just for the sake of generating electricity, but for the militarisation of the area. The flooded area will destroy the base area of ethnic armed [militias].” In the past the KNU has

expressed strong opposition to dams, which has led to violence between the military, or Tatmadaw, and the KNU. Some major dam sites, in particular the Hatgyi dam, are on the internal border of KNU-controlled land. This is now the frontline of an escalating conflict. In Thailand, images have appeared of Tatmadaw camps ablaze from the Myanmar side of the Salween. These appear to confirm KNU claims of a successful April 27 attack. As dam sites become battle grounds, the river's future depends on the outcome of the fighting along its lower reaches.

Who will build?

Six weeks after the military coup, the French energy company EDF suspended the \$1.5-billion Shweli 3 hydropower dam project in response to the jailing of NLD leaders and shootings of protesters and journalists. Other international companies are likely to be equally reluctant. "Much depends on whether the junta manages to establish its effective control of the country," said Sebastian Strangio, author of *In the Dragon's Shadow: Southeast Asia in the Chinese Century*. "Chinese firms, which are less susceptible to the reputational pressures of Western companies, will gradually move in to fill the vacuum." Prior to the coup, U Aung Myint, general secretary of the Myanmar Renewable Energy Association, told *The Third Pole*: "Honestly, we want the government to cancel the agreements for big hydropower projects such as Myitsone and Tasang, but I think it will not happen for many reasons."

Chinese companies feel the heat

The coup drew sanctions from other nations, yet China blocked condemnation at the UN and referred to the violent overthrow of the NLD government as a "cabinet reshuffle". The comment was unpopular on the streets. The early days of the coup saw violence against Chinese-owned businesses and threats to Chinese-built pipelines, leading to pressure from China for the new military government to protect its assets. "Violence against Chinese economic interests in Myanmar, including the oil and gas pipelines that bisect the country, would set off alarm bells at the top levels of the Chinese government," Strangio said. "Of course, any situation in which Chinese economic interests are coming under attack from anti-military protesters would also be one in which China's hydropower interests would also be vulnerable to attack."

Unknown cost

Forgoing large hydropower projects on the mainstream Salween would avoid disruption to sediment distribution, aquatic ecology and local livelihoods, according to a 2018 International Finance Corporation strategic environmental assessment. However, the lack of studies on the Salween means there are many unknowns pertaining to environmental impacts. "Unfortunately, because we don't have good baseline or historical data on either the fish or the fisheries, we may never know in quantitative terms what the impacts of the dams are," said Aaron Koning, a freshwater ecologist and conservation scientist at the Nevada-based Global Water Center. Koning has spent seven years studying a grassroots network of community fish reserves in the Salween basin, and says hydropower dams could devastate the river's ecology and fisheries. He worked with communities harvesting eels that migrate to the Indian Ocean to spawn; their life cycle would be upset by the Hatgyi dam, he says. "We don't know much about the habitat requirements or migration patterns of most other Salween River fish species, some of which are

endemic to the basin and found nowhere else on Earth,” Koning added. In the Mekong, Chinese-built dams have caused deep harm to fisheries.

Ignoring indigenous communities

China and Myanmar have been accused of ignoring ethnic groups when planning dams on the Salween. The people of the conflict-stricken river basin states of Shan, Karen and Kayah states have the most to lose from further hydropower projects. In Thailand, the Salween marks part of the border. Predominantly Karen ethnic communities living along the river, including refugees from Myanmar, rely heavily on its fisheries for nutritional security. There is little hope civil society can mount a defence of the Salween’s ecology, given the Tatmadaw’s crackdown on dissent with tacit approval from the Association of Southeast Asian Nations. The NLD had faced calls from local and international environmental groups to halt and suspend dam projects such as those at Myitsone and Mong Ton (locally called Tasang). The military government that has replaced it is unlikely to listen.

Infrastructure versus inclusion

The hydropower plans are promoted as a way of dealing with Myanmar’s low access to electricity. Almost 60% of the population has no access to electricity, and the NLD had planned for nationwide electrification by 2030. A great deal of this was supposed to be from hydropower. Nevertheless local opposition persisted, even though the Salween region is one of those most deprived. Many living on its banks rely on small rooftop solar panels that provide only a few hours of electricity a day. The National Electrification Plan’s first phase was set to end by mid-2021, U Maung Win, deputy director general of the Department of Rural Development, told The Third Pole prior to the coup, noting plans to provide electricity to 626,757 households in 5,080 villages far from the national grid. Energy needs in Myanmar are expected to rise 15-17% annually. Although sizeable, Mong Ton would only provide around 10% of its energy output to Myanmar, with Thailand, the main investor, buying the rest. U Aung Myint told The Third Pole that Myanmar already relies on hydropower for more than 60% of its electricity generation.

Marriage of convenience

The Mong Ton and Hatgyi dams – as well as Ywathit, Weigyi and others planned for the Salween – have varying levels of Chinese investment and construction involvement. The Chinese-funded Myitsone dam on the Irrawaddy in Kachin state has been a point of friction between China and Myanmar for more than a decade. The plan would have dammed a sacred river, flooded an area the size of Singapore, displaced thousands of people and devastated both fish and wildlife populations. After much lobbying from environmental and Kachin groups, Myanmar’s democratic government halted the Myitsone project but never cancelled it. Strangio said that if China believes that the junta will ultimately prevail over the protest movement, “then it will seek to work with the generals to advance long-standing strategic and economic goals in Myanmar.” That will lead the military government, possibly the one institution most suspicious of China, right into the arms of its northern neighbour. “In that event, continuing international opprobrium would likely force the Tatmadaw into a heavier reliance on China than it would be

comfortable with, but if that is the price of staying in power, I suspect the marriage of convenience would hold,” Strangio said.

URL: <https://scroll.in/article/997089/why-myanmars-junta-is-likely-to-ignore-the-opposition-to-chinese-dams-on-salween-river>

Myanmar: Fishery exports plunge to \$536.57 mln as of 28 May

Export earnings from the fisheries sector in nearly eight months (1 Oct-28 May) of the current Financial Year 2020-2021 touched a low of US\$538.6 million, a significant decrease of \$115.79 million from the year-ago period, according to statistics released by the Commerce Ministry. The figures stood at \$652.37 million during a-year ago period. Myanmar’s fishery exports have slightly declined this year, owing to the COVID-19 impacts and the transport difficulty amid the political changes. The fishery exports through the Sino-Myanmar border has ground to a halt following the consequences and safety measures on the imported seafood amid the COVID-19 pandemic, traders stressed. Myanmar’s fishery export was experiencing a downturn due to the import restrictions triggered by the detection of the COVID-19 on fish imports in China. China was the second-largest buyer of Myanmar’s fishery products, accounting for US\$254 million out of overall fishery export value of \$850 million in the past financial year 2019-2020. At present, the fishery sector is dependent on maritime trade only.

Food and Agriculture Organization (FAO) and World Health Organization (WHO) issued guidelines to ensure food safety during the COVID-19 pandemic in April 2020. Permitted companies are advised to carry out food safety plans, follow the WHO and FAO guidelines, formulate the safety management system and suspend the exports in case any suspicious food borne virus or virus infection risk is found in the products. The export is likely to resume once the products meet food safety criteria set by the General Administration of Customs of the People Republic of China (GACC). Myanmar Fisheries Federation stated that only the G2G pact could tackle problems faced in exporting farm-raised fish and prawns and ensuring smooth freight movement between countries in order to bolster exports. During the last FY2019-2020, MFF expected to earn more than \$800 million from fishery exports, and it reached a target. Myanmar exports fisheries products, such as fish, prawns, and crabs, to markets in 40 countries, including China, Saudi Arabia, the US, Japan, Singapore, Thailand, and countries in the European Union.

The MFF is making concerted efforts to increase fishery export earnings by developing fish farming lakes that meet international standards and adopting advanced fishing techniques. The foreign market requires suppliers to obtain Hazard Analysis and Critical Control Points (HACCP) and Good Aquaculture Practices (GAqP) certificates in order to ensure food safety. Fishery products must be sourced only from hatcheries that are compliant with GAqP to meet international market standards. The MFF works with fish farmers, processors, and the Fisheries Department under the Ministry of Agriculture, Livestock, and Irrigation to develop the GAqP system. Processors can screen fishery products for food safety at ISO-accredited laboratories under the Fisheries Department. Myanmar’s economy is more dependent on the agricultural sector to a large extent.

Also, the fisheries sector contributes a lot to the national gross domestic product (GDP). Its fishery production, including shrimps and saltwater and freshwater fish, is far better than the regional countries. There are 480,000 acres of fish and prawn breeding farms across the country and more than 120 cold-storage facilities in Myanmar. Myanmar exported 340,000 tonnes of fishery products worth \$530 million in the 2013-2014FY, 330,000 tonnes worth \$480 million in the 2014-2015FY, 360,000 tonnes worth \$500 million in the 2015-2016FY, 430,000 tonnes worth \$600 million in the 2016-2017FY, 560,000 tonnes worth \$700 million in the 2017-2018FY and 580,000 tonnes worth over \$730 million in the 2018-2019FY respectively, according to the Commerce Ministry.

URL: <https://www.gnlm.com.mm/fishery-exports-plunge-to-536-57-mln-as-of-28-may/>

Myanmar: Scoular commissioning fishmeal plant

“We expect to commission the facility in July 2021,” a spokesperson for the Omaha, Nebraska headquartered company told us. In terms of the capacity the new fishmeal facility will have when operational, the Scoular representative said the site will process 30,000 MT per year. “It is purpose built for quality control and redistribution and will meet or exceed all international standards,” she added. The company has been selling to Asian food and feed customers for more than 25 years and is a leading supplier of soybeans to the region and fishmeal worldwide. In 2019, the company, which reports more than US\$4.6bn in sales, hired former ADM executive, Adrian Gasparian, to lead its Asia expansion. It has been building a trade team in Singapore to support intra-Asia trading for Scoular’s food and feed ingredients. Recent months also saw the US company launch a feedstuffs distribution business regionally in Indonesia and Myanmar to provide customers with just-in-time inventory and local delivery options. “Most of the products that we sell will eventually be available through our distribution programs. We believe there is additional demand for reliable, quality controlled, local distribution that our customers can depend on without shipping and documentation delays.”

Data shows boost in global fishmeal output

Separately, the latest IFFO analysis shows a 30% improvement in the fishmeal and fish oil global output in March 2021 compared to the same month last year. The total cumulative productions of the countries considered in IFFO’s market report through the first quarter 2021 were higher year on year: fishmeal was up by 60%, and fish oil saw a jump of 83%. Peru and Chile were the only areas where the March performance was superior to the average of the previous five-years for the same month. Yet, this was sufficient to produce an almost 30% improvement in the overall activities of March 2021 compared to March 2020, said the marine ingredients organization. Denmark showed a year-on-year increase in the supply of fish oil over this same period, according to the IFFO data. China’s fishmeal production remained poor in April, found the analysis.

URL: <https://www.feednavigator.com/Article/2021/05/17/Scoular-commissioning-fishmeal-plant-in-Myanmar>

Myanmar: Instability puts biggest mangrove forest at risk

Wun Paik mangrove forest, the biggest of its kind in Myanmar, has seen increased logging since the military coup in February, according to Ramree Township residents. Illegal logging was not uncommon in the Wun Paik reserve prior to the military takeover, but only took place in remote corners of the forest, with loggers using the sea and inland waterways to take away timber harvested illegally. But after the coup, even trees near the Yangon-Kyaukphyu road were cut down and taken away in motor vehicles, said Ramree resident U Kyaw Kyaw Naing. “Those trees were gone with the political instability. I have seen trees being cut down in broad daylight,” said U Kyaw Kyaw Naing. Local mangrove forests provide a lifeline for fish and prawn stocks in Taungup, Ann, Kyaukphyu and Ramree townships, he said. Because these forests are habitat for fish, prawn and other aquatic species, deforestation will lead to depletion of their stocks, said chairman Dr. Maung Maung Kyi of the Rakhine Coastal Region Conservation Association.

“This forest is a valuable resource for Arakan State, but it has been prone to logging both at present and in the past. If we act now, we will be able to save it. Otherwise, we will lose the forest in the next 10 years,” said Dr. Maung Maung Kyi. While people must be educated about the perils of deforestation within the Wun Paik mangrove forest reserve, there is also a need to conduct monitoring and provide local people who make a living selling firewood, or making charcoal out of Wun Paik’s forest resources, with livelihood alternatives, said Dr. Maung Maung Kyi. “Politicians and authorities have done nothing [to conserve the forest],” he said. Community-based groups and local police conduct four patrols per month around the forest, said U Min Htet Aung, chairman of the Ramree Township Forest Department. “We Forest Department staff also conduct patrols as necessary. Besides patrols, we also regrow mangrove trees. Currently, because of political instability, people from other parts of Arakan State are also cutting trees in the forest for firewood,” he said. The Wun Paik forest reserve straddles Ramree and Kyaukphyu townships, covering more than 150,000 acres rich in biodiversity.

URL: <https://www.bnionline.net/en/news/political-instability-puts-myanmars-biggest-mangrove-forest-risk>

Myanmar: \$300 million fish auction market to promptly be established in Myeik

A fish auction market project with an investment of US\$300 million will be implemented as quickly as possible in Myeik, Taninthayi Region, said an official from Myeik Corporation. Located on 700 acres of land by the riverside of Kyaukphyu river in Kywelku village, Myeik town, the fish market project also includes an industrial zone, a jetty for fish stock handling and housing. Chairman of Taninthayi Region Administration Council Tin Aung held a meeting with local entrepreneurs on April 27 and discussed the project. During the meeting, the chairman called for prompt implementation of the project. “We have already submitted the matter under the previous government. Now, we submitted it again. He (the chairman) said the project should be implemented as quickly as possible. We were told the project could be implemented on 700-acre land. We have yet to get approval. But officials are making inspection visits. The union

minister for agriculture and livestock will be coming soon,” said Hla Than, chairman of Myeik Corporation.

The region council chairman quoted the State Administration Council as saying that the fish auction market project will be allowed on 700 of over 2,000 acres of land as earlier submitted. He also stressed that the project should be outside farmland project areas of Myeik that has 64 percent farmland area. A corporation director said the seven-year project worth US\$300 million will create tens of thousands of jobs. The project includes a jetty, cold storage room in phase-1, processing factories in phase-2 staff housing in phase-3 and extended sites in phase-4. “If we are allowed to implement the project successfully, we will be able to reduce over 20 years of our independence on the Thai market. We will be in a position to compete against Thailand’s Mahachaing market. We will be able to produce over 2 million tons of products every year. Myanmar’s fishery industry will develop,” said a local fishery entrepreneur.

URL: <https://elevenmyanmar.com/news/300-million-fish-auction-market-to-promptly-be-established-in-myeik>

Myanmar: Some fisheries operations suspended in Thandwe TWSP as seafood prices deemed too low

Some Kyawt Paik fishing entrepreneurs have suspended their businesses as they are facing losses when fish and prawns do not fetch good prices, fishermen in Thandwe Township said. The fishing industry stakeholders are facing long-term losses because the fishing industry has been hard-hit by the COVID-19 pandemic since last year, and seafood prices are below sustainable levels. “The fuel oil price is also increasing now, while the seafood does not get a good price. So, all Kyawt Paik fishing entrepreneurs are facing more challenges,” said U Kyaw Wai Soe, chair of the Kyawt Paik Fishing Entrepreneurs Association in Thandwe Township.

The price of fish is down from K7,000 per viss to K1,000 now, and there are few buyers even at that price, Kyawt Paik fishing entrepreneurs said. They are facing financial difficulty to prepare their boats and nets to resume fishing in the coming monsoon season, and say they need help to sustain their business. As many as 26 fishermen are working for a fishing boat for Kyawt Paik fishing, and they are worried that the owners will call it quits on their business. “We have to work 25 days a month. We are paid about K8,000 a day. Many people are depending on the business,” said Ko Kular, a fisherman in Thandwe Township.

There are more than 300 fishing boats that are mainly working for Kyawt Paik fishing in Thandwe Township, including at Jate Taw ward, where 15 of 90 boats have suspended business operations, according to the Jate Taw Ward Kyawt Paik Fishing Entrepreneur Association. Women who normally generate income working in dried fish manufacturing — one major facet of the Kyawt Paik fishing industry — say their source of income has dried up since the beginning of the COVID-19 outbreak. “I earned about K2,000 a day when I was working to sun-dry the fish and keep them in the evenings. If the Kyawt Paik fishing business is closed, we will be in trouble for our livelihoods,” said Daw Khin Than Naing, a worker involved in dried-fish processing in Thandwe Township.

URL: <https://www.bnionline.net/en/news/some-fisheries-operations-suspended-thandwe-twsp-seafood-prices-deemed-too-low>

Myanmar: Mapping water resources is key to developing sustainable aquaculture and improving nutrition

Many people in Myanmar suffer from poor nutrition because they eat too many carbohydrates – primarily rice – and too little protein. One way to overcome poor nutrition is to expand small-scale aquaculture by increasing the number of fishponds and stocking existing water bodies with protein-rich fish. This is the ambition of the Fish for Livelihoods project, led by WorldFish and supported by USAID. The International Water Management Institute (IWMI) is supporting the project by identifying locations with sufficient and sustainable water resources to expand fish production. IWMI's project team is modeling the Irrawaddy river basin that covers approximately 50% of Myanmar (337,400 km²). The objective is to quantify available water sources and pinpoint potential areas for developing new fishponds while also monitoring water quality to understand where poor conditions may constrain development. Additionally, as sustainability of aquaculture development is a priority before building new ponds and other infrastructure, it is crucial that an assessment is made of the possible impacts on future water resources from climate change. The findings of an IWMI analysis of historical weather-station data show that Myanmar's climate is already changing. Data recorded at 13 weather stations, located in various hydro-ecological zones, revealed a temperature rise of between 0.1°C and 0.3°C at 11 of the stations between 1986 and 2015. Extreme rainfall (more than 30mm a day) increased at three inland stations: Mandalay, Nyaung Oo and Pyay.

Further analysis using regional climate model (RCM) projections (from the Coordinated Regional Climate Downscaling Project for South-East Asia) also showed that the number of days with temperatures above 30°C is forecast to increase in the future. The IWMI project team is also researching the various types of ponds that exist in Myanmar. Pond typologies are differentiated by water source and include: springs; groundwater seepage from shallow aquifers; groundwater extracted from boreholes by pumping; surface water directed through dams or streams; surface water diverted from streams or rivers; and rainwater harvesting. So far, the team has mapped the different pond typologies, and assessed their quality and availability using remote sensing images and GIS. Preliminary results show that Sagaing region (north-western part of Myanmar) has the largest area with potential for expanding aquaculture due to availability of diverse water sources. However, Kachin State (northernmost part of Myanmar), which has the smallest suitable area, has more diverse water sources, encompassing both surface and groundwater supplies. Having diversity of water sources reduces risks related to water availability and increases resilience to climatic shocks. So, it may be that expanding aquaculture in moderate-sized areas with greater diversity of water sources is the best option. IWMI's work will help to ensure that future investments in aquaculture in Myanmar will be sustainable, and able to boost rural livelihoods and nutrition as climate change takes hold.

URL: <https://www.iwmi.cgiar.org/2021/04/mapping-myanmars-water-resources-is-key-to-developing-sustainable-aquaculture-and-improving-nutrition/>

Myanmar: Dams along Mekong by China threatening farmers and fish in Southeast Asia: Report

China's construction of large hydropower dams along the river to feed country's growing energy needs is causing problems downriver — having devastating impacts on water availability and the fertile soil that feeds hundreds of millions of people in Southeast Asia. The Mekong River flows some 5,000 kilometers from the Himalayas to China's Yunnan province and then to Myanmar, Laos, Thailand and Cambodia and then reaches to sea through Vietnam's Mekong Delta. In a detailed report by DW News, it has been revealed that rapid construction of dams over the Mekong is causing problems for fish stock and farms in the country's downriver. "Up river China has been constructing a number of large hydropower dams to beat the country's rapidly increasing energy needs but it is causing problems for fish stock and farms in the country's downriver. It also has a dire impact on the fertile soil on the river and Mekong Delta which feeds hundreds and millions of people," said a report. "With more dams under construction upriver, the future of the region is at stake", it said. DW journalist visited farmers and fishermen in the countries along with the Mekong River and talked to experts for a possible solution. In late November 2019, the TV station of Cambodia's Phnom Penh Post reported on a drought that gripped the lower Mekong since the middle of the year.

For the first time since the records are being kept, the river bed has almost completely dried up all across Cambodia. That's despite the fact that it's the monsoon season when the mighty Mekong River is flowing swiftly teeming with fish. Instead, fish catches which provide three-quarters of Cambodia's protein requirements dropped by 80 to 90 per cent till 2019. A fisherman in Cambodia said that his family's survival is under threat. "I used to catch 30-40 kg of fish but not anymore. It's not even enough to feed our family," he said. DW report said that the estimated economic damage in Vietnam, Cambodia, Thailand and Laos amounts to several billion Euros. The Mekong typically swells in the rainy season where it converges with the Tonle Sap River, causing an unusual reversed flow into the Tonle Sap Lake, filling it up and providing bountiful fish stocks.

But in recent years, the flow to Southeast Asia's largest lake has at times been delayed, a factor blamed on drought and hydropower dams upstream on the Mekong. Whether or not China's 11 dams are harming downstream nations' dependency on the river has become a geopolitical issue, with the United States urging Lower Mekong governments to demand answers. China's Mekong River dams held back large amounts of water during a damaging drought in downstream countries in 2019 despite China having higher-than-average water levels upstream, a US research company said in a study. The findings by Eyes on Earth Inc, a research and consulting company specialising in water, published in a US-government funded study, could complicate tricky discussions between China and other Mekong countries on how to manage the river that supports 60 million people as it flows past Laos, Myanmar, Thailand and through Cambodia and Vietnam. The 2019 drought, which saw the Lower Mekong at its lowest levels in more than 50 years, devastated farmers and fishermen and saw the massive river recede to expose sandbanks along some stretches and at others turned from its usual murky brown to bright blue here because waters were so shallow and lacking in sediment. "If the Chinese are stating that they were not

contributing to the drought, the data does not support that position,” said Alan Basist, a meteorologist and president of Eyes on Earth, which conducted the study with funding from the US State Department’s Lower Mekong Initiative.

According to Alan Basist, the upper part of the Mekong basin in China did not suffer from a drought in 2019 and on the contrary there had actually been considerably more rain and meltwater compared to other years but China held back the lion’s share of this water with its huge dams on the upper reaches of the Mekong. If China had not blocked the flow of the Mekong, the water levels in Thailand and Cambodia would have been four meters higher in 2019 and the lower reaches of the river had most likely not suffered a catastrophic drought. Basist told DW, “What had happened that the China Southern Power Grid Company was releasing an unprecedented amount of water during the dry season to basically sponsor hydroelectric production to the grid. They drain the reservoirs at the beginning of 2019 producing hydroelectric energy and then they refilled the reservoirs in 2019” Mekong River is the lifeline of South East Asia. 60 million people from almost 100 ethnic groups live along the river’s banks. The Mekong provides them water, fish and fertile soil for rice production. It serves as a transport and trading route and sustains biodiversity. It is home to some 800 mammals, 2,800 species of birds, 1300 species of fish at the same time the region is highly endangered by climate change. The riverbeds dropped almost 5000 meters over its 4,300 km course. All Mekong countries are building an increasing number of hydro-electric power plants since the early 1990s. China, in particular, is pushing the construction of dams.

URL: <https://www.aninews.in/news/world/asia/dams-along-mekong-by-china-threatening-farmers-and-fish-in-southeast-asia-report20210408224032/>

Myanmar: Mekong countries to invest over \$60 mln to improve state of river

The Mekong River Commission has unveiled the financial component of a new strategy to address emerging challenges and improve the overall state of the river basin. Under the new five-year strategic plan, it seeks to invest over \$60 million, of which about 40 percent would come from member countries, according to a press release it issued Monday. Its 10-year Basin Development Strategy (BDS) strategy will focus on five priority areas: improved ecological functions of the Mekong River for a healthy environment and productive communities, improved access to and use of water and related resources for community well-being, sustainable development for inclusive economic growth, resilience against climate and disaster risks, and enhanced regional cooperation from a whole-of-basin perspective. The BDS is based on recent assessments of the impacts caused by water and related resources developments and infrastructure, including dams that have changed flow regimes, affecting sediment transport and accelerating bank erosion. These have in turn led to a decline in natural fish populations, the degradation of environmental assets and floodplains, and the reduction in the replenishment of the Mekong Delta. Climate change has further added to the severity of the impacts, bringing more uncertainties and risks, including frequent droughts and floods.

The strategy also recommends measures that all stakeholders can implement to achieve their strategic priorities. A new key direction for the MRC’s work will be to proactively assess and

identify new storage options and new flow and environmental limits, and recommend basin-wide joint investment projects that will enable flood management, drought relief, energy security, and environmental protection. Work will also be carried out to ensure that new power generation plans consider the full range of viable generation sources, including the integration of water-energy options and the complementary use of wind and solar power. This will increase sustainability while addressing potential climate risks. The MRC will also explore how water infrastructure projects throughout the basin could be coordinated to enhance their benefits and limit their adverse environmental impacts on the Mekong's mainstream. "The strategy is aligned with the Mekong governments' priorities and needs for achieving a stronger and more resilient Mekong River Basin through proactive planning and coordinated management, and thus ensures a balance between economic development and environmental protection," Dr An Pich Hatda, MRC secretariat chief executive officer, speaking at the official launch of the BDS and SP Monday, said. The launch event also commemorated Mekong Day, when member countries signed the Mekong Agreement on April 5, 1995. The Mekong River flows 4,880 km from its origins in Tibet, 2,130 km of it in China, where it is called Lancang. It then flows south through Cambodia, Laos, Myanmar, Thailand, and Vietnam before reaching the sea.

URL: <https://e.vnexpress.net/news/news/mekong-countries-to-invest-over-60-mln-to-improve-state-of-river-4258469.html>

Myanmar: Study shows fisheries management ineffective

A recent paper that represented the first in-depth study of Myanmar's southern offshore fisheries in 60 years has found that between 2009 to 2018, Myanmar's fisheries management scheme was ineffective and resulted in a drop in catch across the five gear types studied. The paper – authored by Gilles Hosch of DIATOM Consulting, Ben Belton of Michigan State University, and Gareth Johnstone of WorldFish – analyzed over 26,000 logbook records for five gear types commonly used in the region. The gear types – fish and crab traps, squid and purse seines, and demersal trawls – all saw drops in catch per unit effort (CPUE) between 27 percent and 64 percent over the period. "The basic fishery management measures introduced from 2012 onwards were shown to significantly modulate total fishing pressure across several gear types within years, but their inconsistent implementation failed to significantly reduce fishing pressure across the entire study period," the paper said. The paper also found that fishery-dependent data was often inconsistent, and that the national marine fishery output was often far lower than the officially reported figure. The official reporting by the country's government, which in 2017-2018 reported the catch as 3.16 million metric tons – is three times the annual catch estimated and published by the FAO in 2016.

"Hosch estimated that the 2013-2014 national marine fishery output was less than half the officially reported figure of more than 2.7 million tons, based on fishery-dependent data sampled across the country, and including an earlier version of the dataset underpinning this study," the paper said. Surveys, according to the paper, indicated the biomass reduction of small pelagics from 1980 to 2013 was 89 percent, and species compositions indicated that shorter-lived species were replacing longer-lived species. In commercially important species groups, the paper said, catch rates diminished by up to 95 percent. The trends, the report said, result from the

intensification of fishing effort over the period. “This pattern is similar to that in most other Southeast Asian countries, but occurred later in Myanmar, following military government promotion of the expansion of the domestic fleet and joint ventures with foreign fishing enterprises during the late 1980s, 1990s, and 2000s, to generate rents and foreign exchange earnings,” it said. The paper said the conclusion of the research is that consistent data collection and analysis will serve “as foundation for future improvements in management effectiveness.” For now, though, current data indicates Myanmar’s fisheries may “continue to teeter on a cliff’s edge.” “The bottoming out of CPUE trends before collapses occur in multi-gear, multi-species fisheries have been documented in the past,” the report said. “Further trophic cascades, species substitutions and commercial extinctions of valuable stocks may occur – further diminishing the overall economic value of the sector.”

URL: <https://www.seafoodsource.com/news/supply-trade/study-shows-myanmar-s-fisheries-management-ineffective>

Myanmar: Fishing industry in Mon State grinding to a halt

U Thet Win Paing, a fish entrepreneur said: “We mainly export fish to China and neighboring countries. As there is no money in circulation and fuel prices are rising, the fish industry cannot cover costs. Now fish exports have totally stopped. We have to sell fish locally. Now we only sell fish in Mawlamyine, Mudon and Thanbyuzayat.” Due to the shutdown of the fish industry, around 20,000 fishing workers in Mon State are jobless. Most fishing entrepreneurs will continue providing assistance to local fishing workers. U Myint Soe, Chair of Mon State Fishing Entrepreneurs Association: “The impacts caused by the COVID-19 and political situation have all worsened the fisheries industry. I worry that the fishing industry may not return to normal when the fishing season sets in.” The non-fishing season in Myanmar is from May 1 to July 31. As of August 1, the fishing industry can re-start every year, according to the Mon State Fishery Federation. More than 1,000 on-shore and off-shore fishing vessels are fishing in Mon State. Fishes are exported to ten townships in Mon State and Yangon via the wholesale fishing center in Mawlamyine. The anti-coup protests are gaining momentum nationwide. Most local businesses are unable to run due to the impacts of COVID-19. The banking industry and export-import businesses have stopped.

URL: <https://www.bnionline.net/en/news/fishing-industry-mon-state-grinding-halt>

Myanmar: Denmark promotes good practices in sustainable fishery co-management in Myanmar

The embassy of Denmark in Myanmar released an update on the latest ongoing project ‘Sustainable Coastal Fisheries (SCF) Programme’ on 28 January 2021, as follow: Through the Sustainable Coastal Fisheries (SCF) Programme, Denmark is supporting the Department of Fisheries in its efforts to develop a set of guidelines for coastal fisheries co-management in Myanmar. The guidelines are aimed at streamlining good practices both at the institutional level and at the community level.

Over the past few weeks, the SCF Programme has facilitated a series of meetings for the Department of Fisheries to discuss best practices and the experiences of partner organizations involved in coastal fisheries. The SCF Programme has so far helped establish eight fisheries co-management groups in Thanintharyi Region and Rakhine State whereby the representatives of the fishing communities and the Department of Fisheries work together for the sustainable management of the fishery resources.

URL: <https://scandasia.com/denmark-promotes-good-practices-in-sustainable-fishery-co-management-in-myanmar/>

Myanmar: Mon State calls for investors in the fisheries sector

Mon State is calling on both local and foreign investors to take advantage of its strategic location and geography to invest in the fisheries sector. U Myint Soe, chair of the Mon State Fisheries Federation said interested parties can invest in the sector to produce finished and value-added products. Other players in the industry see such investments as an opportunity to further develop the state and its economy.

“We would like to invite investors to gain access to modern technology. Mon State in return can offer our land, lakes, and labour”, said vice-chair of the Mon State Fisheries Federation U Khin Maung Yee. Mon State is geographically connected to the Andaman Sea and Gulf of Mottama in the West with more than 140 miles of coastline. Fisheries related businesses are a key driver for the state’s economy. Shipping by sea is readily available and transportation by road is also an option for exports to China, Thailand and India. “Mon State should invite businesses that will invest in canned fish or dried fish factories,” said local businessman U Thet Win Paing. The state usually produces more than 100,000 tonnes of prawns and shrimps every year. As much as 12,000 tonnes are exported to China, Singapore, and Malaysia annually.

Approximately 80 percent of the fishery products that are produced within the state are exported to China. Mon’s call for investors comes on the back of a decline in fisheries exports due to the COVID-19 pandemic. While the value of Myanmar’s fish export market increased from US\$732.2 million in the 2018-19 fiscal year to \$858.9 million in 2019-20, this figure is projected to drop drastically as the market has been plagued by difficulties arising from the COVID-19 outbreak. “The government will try to negotiate with other countries to connect and export fishery products to their markets,” said Minister of Agriculture, Livestock and Irrigation U Aung Thu. “We need to negotiate with the Myanmar Fisheries Federation and the respective departments to issue COVID-19 free certificates on the fish produced in the country,” he said. “This will help identify and set standards, upgrade the technological skills of the staff and improve the knowledge of the cold storage facilities.” he said. He added that the Department of Fisheries and Cooperative Department will also collaborate to improve local fish consumption.

URL: <https://www.mmmtimes.com/news/mon-state-calls-investors-fisheries-sector.html>

Myanmar: Decent work for fishing and seafood migrant workers in Asia Pacific

Migrant workers in South-East Asia's fishing and seafood processing sectors will benefit from a new programme that continues efforts to promote regular and safe labour migration throughout the industry. "Ship to Shore Rights South East Asia" is a four year (2020-2024) programme implemented by the International Labour Organization (ILO) in collaboration with the International Organization for Migration (IOM) and the United Nations Development Programme (UNDP). The €10 million (US\$11.29 million) initiative is funded by the European Union (EU). The objectives of the programme include strengthening legal frameworks, protecting labour rights, and empowering workers in the fishing and seafood processing sectors in Cambodia, Indonesia, Laos People's Democratic Republic, Myanmar, the Philippines, Thailand and Viet Nam.

The programme will build upon the work of the EU-funded Ship to Shore Rights project, which came to an end in March 2020. By bringing together the three UN agencies it will draw on the partners' experience in the region, to protect the rights of migrant workers and address issues such as forced labour, human trafficking, illegal recruitment practices, and poor access to information. The programme will work with current, potential and returning migrant workers in the fishing and seafood processing sectors, their families, and communities in the countries of origin and destination. It will also collaborate with national government authorities, workers' and employers' organizations, recruitment agencies, vessel owners and their associations, civil society organizations, and community-based organizations. Pirkka Tapiola, Ambassador of the European Union to Thailand said, "The regional, multi-country cooperation will help create a level playing field that will benefit the relevant governments, private sectors and workers. This regional intervention will maintain the political link between sustainable fisheries and decent labour practices."

"While progress has been made to improve working conditions for migrant workers in the fisheries and seafood processing sectors, many challenges still exist. This new initiative will promote innovative, rights-based and safe solutions to manage cross-border migration and employment. It will lead to a stronger industry and decent work for the women and men it employs," said Chihoko Asada-Miyakawa, ILO Regional Director for Asia and the Pacific. "This programme will continue to promote regular labour migration for those working in the fishing and seafood processing industries, ensuring that workers are recruited through safe channels. The project also places particular importance on the ability of migrants to affect change through increased awareness of their labour rights and ability to seek remedies where exploitation or trafficking is identified," said Nenette Motus, IOM Regional Director for Asia and the Pacific.

"The contributions of migration to development in Asia Pacific are significant and can increase further, especially where it occurs through safe, orderly and regular channels. UNDP highly values our partnership with the European Union, ILO and IOM under this programme, as it allows us to unlock the transformative potential of migration and to support socio-economic progress in South-East Asia," said Christophe Bahuet, UNDP Deputy Regional Director for Asia and the Pacific. Countries in South-East Asia are among the world's top producers and exporters of fish and seafood products. The fishing and seafood processing supply chains rely on several

elements including capture fisheries and land-based primary and secondary processing. Migrant workers contribute significantly to these sectors as fishers and workers in the processing phase.

The regulatory framework for labour migration in the fishing and seafood processing sectors is often weak, with migrant workers frequently recruited through irregular and informal channels. While there have been important improvements in recent years, workers still report lack of written work contracts, underpayment or withholding of wages, other types of wage theft, and coercion or involuntary work. The COVID-19 pandemic has also had a severe impact on the lives and livelihoods on migrant workers and their families. The Ship to Shore Rights South East Asia programme will support governments and partners in tackling these challenges and ensure robust protection for all migrant workers in these economically and socially important sectors.

URL: <https://www.miragenews.com/decent-work-for-fishing-and-seafood-migrant-workers-in-asia-pacific/>

Myanmar: Puts early stop to fishing season

The country usually puts a ban on fishing activities at sea from June but depleting fish stocks has resulted in the need to advance the no-fishing period to May, said the Myanmar Fishery Department. “With effect from May 1, 2021, fishing at sea will be banned. Normally, the ban starts from June every year. One reason for the ban being imposed one month earlier is the scarcity of fish resources. This ban is a regular restriction imposed during spawning season,” said U Myint Soe, chair of the Mon State Fishery Federation.

“During the ban, no offshore fishing can be done across the nation. The number of fish caught is getting less every year. This means there is a depletion in fish stocks. The fish egg-laying period is from February to April. The ban was moved one month earlier (to coincide with the spawning season). Suspension of fishing activities may be introduced even earlier in the future,” he said. Myanmar’s fishing season usually lasts about nine months from September 1 to end of May. At present, about 300 boats will carry out fishing activities in the Mottama Gulf, the Bay of Bengal, the Andaman Gulf and their adjacent areas. According to the Mon State Fishery Federation, the fish industry has been struggling due to declining prices and lesser fish being caught in the Mon fishing blocks.

URL: <https://www.mmtimes.com/news/myanmar-puts-early-stop-fishing-season.html>

Myanmar: Tanintharyi govt proposes economic zone for fisheries

The Tanintharyi Region Government has submitted a proposal to the Myanmar Investment Commission (MIC) for the construction of an economic zone focusing on the fisheries industry, including a fish wholesale market, cold-storage facilities and jetties for trade at the Myanmar and Thai border, according to U Khin Maung Lwin, assistant secretary at the Ministry of Commerce. “Union-level discussions are taking place with Myeik Public Co, and the MIC is working on enabling the project to get off the ground as soon as possible,” he said, adding that the project

aims to create job opportunities for Myanmar migrant workers and generate greater longer term value for the local fisheries industry.

In the meantime, the ministry will work on initiating river catfish exports at the Myanmar, China border, said U Khin Maung Lwin. Currently though, the Myanmar seafood industry is using alternative and more expensive routes for their exports to China as a result of COVID-19 transportation difficulties. Myanmar Eel Entrepreneurs Association's secretary U Tine Kyaw said that different provincial administrations in China have resulted in them having to use the Muse route for three months now, instead of the older Chin Shwe Haw route. The move to expand comes after a decline in Myanmar's fishery product exports due to COVID-19. In fiscal 2019-20 the industry generated just US\$860 million in exports compared to a forecast of more than US\$1 billion.

The government is now also making efforts to promote domestic consumption of local fisheries. At a recent video conference, government officials from the Ministry of Commerce Tanintharyi, Yangon, Ayeyarwady, and Mandalay regions discussed ways to promote fish consumption and restructure the distribution system, such as utilising refrigerated trucks to sell fish, prawns and cuttlefish locally. "We have carried out similar plans in Tanintharyi and now officials are discussing adopting this system in upper Myanmar," said U Kyaw Kyaw Oo, chair of the Tanintharyi Region Chambers of Commerce and Industry. According to government forecasts, the local fish consumption rate can increase within two or three years if the ministries are successful in executing its plans, U Kyaw Kyaw Oo said. –

URL: <https://www.mmtimes.com/news/tanintharyi-government-proposes-economic-zone-fisheries.html>

Myanmar: River conservation by an Indigenous community

Rivers are a major source of renewable water, and provide food, jobs and a sense of place and cultural identity for people living in the vicinity. For many Indigenous peoples, rivers are central to how they understand themselves, their origins and their relationships to the rest of nature. As a citizen of the Penobscot Nation in Maine put it, "The river is us: the river is in our veins. Writing in Nature, Koning et al. report ecological surveys that demonstrate how local Indigenous people in the Salween River basin on the border between Thailand and Myanmar have successfully managed the river for conservation purposes and to protect livelihoods. Both biodiversity and the people in river-associated communities are under severe stress the world over. Across the globe, 30% of freshwater fish (see go.nature.com/3ixfd9l) are classified as being at risk (in either the critically endangered, endangered or vulnerable categories) in the 2020 Red List of threatened species compiled by the International Union for the Conservation of Nature. Furthermore, it is projected³ that half the human population will live in water-insecure areas by 2050. Principal among the threats to rivers are pollution, climate change, invasive species, changes in surrounding land use, and the construction of dams and infrastructure that affect river flow.

These issues need to be addressed on scales ranging from local to global, and solutions should draw on the knowledge, practices and aspirations of those whose lives are most closely entwined with river health. Koning et al. assessed the outcome of a network of small fishery no-take

reserves (areas where fishing is not allowed), and found that there was an average 27% rise in species richness, 124% higher fish density and 2,247% higher fish biomass in the reserve-associated waters compared with the corresponding values for nearby areas open to fishing. The presence of larger species and more individuals in the reserves is what drives the much higher biomass there. The authors suggest that such networks of locally managed, small, protected river areas could be used in other river systems to enhance fisheries and to conserve biodiversity. The authors' work highlights the importance of inland waters to food and livelihood systems, demonstrates the value of community-led conservation, and points out commonalities between protected-area conservation strategies in marine and freshwater ecosystems. Marine-protected areas, which are usually created by governments, are used widely in ocean conservation and fisheries, but much less commonly in fresh waters⁴. The authors characterize the reserves studied as being created by the S'gaw Karen (also known as Pwak'nyaw) Indigenous people who live in the river catchment areas.

The paper thus also supports the growing recognition⁵ among scientists and conservationists of the effectiveness of Indigenous resource-management practices. Koning and colleagues' study draws on natural sciences limnology (the freshwater equivalent of oceanography) and fish ecology but also discusses how river management operates at a community level. Their natural-sciences disciplinary lens allows them to rigorously evaluate the benefits that protected areas confer on fish conservation and on the sustainability of local fish catches. In the area studied, Indigenous communities had planned and implemented local no-take reserves that complement other community-based conservation initiatives, including the management of adjacent land. However, the context in which this management system evolved, the knowledge and politics involved in its creation, and how local forms of knowledge and practice can be supported and valued are less in focus in Koning and colleagues' study. Pwak'nyaw communities have been profoundly transformed as a result of colonization in Myanmar, the arrival of foreign missionaries in Myanmar and Thailand, and state modernization projects in both countries. Supporting river conservation here and elsewhere at locations where other Indigenous peoples live will require a reckoning with such legacies and a willingness to make space for local and Indigenous voices to be heard, alongside those of scientists, in river-basin planning. One of us (V.C.) is a Pwak'nyaw person, born in Hpa'an, Myanmar, on the banks of the Salween River, and believes that it is crucial that science conducted in Indigenous territory incorporates Indigenous systems of knowledge and beliefs, and for Indigenous people to have ownership over data that involve them.

Although, during a period of 8 years of research, Koning et al. worked with local people for more than 18 months when living in the study area, there is scope for furthering these relationships so that Indigenous perspectives have increased visibility. An absence of Indigenous agency and control in the production of knowledge is a key issue, leading to calls for Indigenous data sovereignty and the decolonization of science. Koning and colleagues' study positively recognizes Pwak'nyaw involvement in conservation, and includes some cultural context, although Pwak'nyaw perspectives are lacking. One consequence of this might be the study's focus on what the Pwak'nyaw would regard as only part of their integrated system of land and water management. For example, Pwak'nyaw don't commonly identify themselves by categories that are familiar to those in Western culture, such as being a farmer or a fisher. Rather, rotational farming, growing rice, gardening, hunting, gathering and fishing are integrated parts of a

Pwak'nyaw livelihood. Community-based research on Pwak'nyaw livelihoods in northern Thailand has found that fish conservation is also integrated into rotational farming practices. For instance, the concept nya pla htau, meaning fish surface, prohibits the clearing of a field on adjacent sides of a river bank in successive years to conserve fish-breeding grounds, and knowledge about fish is a factor in the selection of farmland⁷. In this sense, farming cannot be separated from fishing, which cannot be separated from conservation, because they are all part of a whole and it is beneficial for them to be studied as such. Future studies, which should involve collaboration with Indigenous researchers, could adopt approaches to integrate Indigenous and scientific knowledge and Indigenous and Western legal and management approaches in ways that recognize and draw on both⁸. This would help to address some of the unanswered questions in Koning and colleagues' valuable study on the origins, sustainability and future of this successful network of reserves.

URL: <https://www.nature.com/articles/d41586-020-03316-y>

Myanmar: Implements sustainable aquaculture programme

The government will implement the Myanmar Sustainable Aquaculture Programme (MYSAP) under which support will be provided to fisheries businesses. Help will also be provided in connecting with markets from the EU, said U Wai Lin Maung, Director General at the Fisheries Department under the Ministry of Agriculture, Livestock and Irrigation. MYSAP is jointly implemented by the Myanmar Department of Fisheries and the German development agency, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), with the EU as its main funding agency. Fisheries and aquaculture products account for the main source of animal protein and micronutrients in domestic diets. However, in some coastal areas of Myanmar, unsustainable fishing since 1980 has resulted in the decline of wild fish stocks by up to 90 percent.

This significantly threatens the quality of local nutrition and income, particularly in rural areas, where 70pc of the population live. Through MYSAP, the government aims to address those issues by intensifying aquaculture productivity at selected coastal and freshwater value chains in a sustainable way. Under the program, the authorities will contribute to input supply, production and product transformation, while also facilitating trade and consumption to benefit communities suffering from malnutrition. The Ministry of Agriculture, Livestock and Irrigation will also help to alleviate the impact of COVID-19 on the local fisheries industry, which has suffered from weak demand, under MYSAP. In addition, the government is also drafting a National Aquaculture Development Plan to ensure that proper support is channeled to the industry through government policies, aid and investments. Myanmar fisheries production has increased gradually since 2016 and now generates US\$853 million from marine products exports.

URL: <https://www.mmtimes.com/news/myanmar-implements-sustainable-aquaculture-programme.html>

Myanmar: Proper disposal of fishing nets emphasized in coral reef conservation efforts

The fisheries industry must systematically dispose of old fishing nets in order to protect Arakan State's coral reefs, according to U Ant Maung, a marine species conservation officer from the Wildlife Conservation Society (WCS). He said when fishermen discard fishing nets into the sea without proper disposal, they can cling to underwater reefs and damage them. "Coral reefs can be destroyed by minor damage ... Coral reefs can be damaged by the fishing nets, he explained. "Fishermen need to take their fishing nets back ashore if they no longer need to use their nets while fishing at sea. Disposable fishing nets should not be thrown into the sea. In addition, offshore fishing vessels, poaching, deforestation and soil erosion during the rainy season can also damage coral reefs, he said. The presence of coral reefs along the coast helps prevent landslides, enriches fish stocks and absorbs carbon dioxide from the sea, said Dr. Cherry Aung, a Department of Marine Sciences professor at the University of Patheingyi. She argued that for these reasons it is important to systematically maintain existing coral reefs rather than view them as a resource that can easily be replaced. "If coral reefs are replanted, it is very unlikely because the growth rate of coral reefs is very elongated.

Even the [fastest-growing] coral reefs grow about one centimetre a year. Therefore, reducing damage to coral reefs is the key to protection, she explained. The designation of coral reefs as protected areas and the establishment of community-based tourism can generate income for locals and earn revenue from foreign tourists, she added. Coral reefs prefer warm, clear waters, and the Indo-Pacific region is home to most of the world's coral. Many local fishermen are still unaware of the fact that discarded fishing nets are destroying underwater coral reefs, said a marine worker from the town of Ngapali in Arakan State's Thandwe Township. "We did not know that these nets could damage coral reefs because no one had come to educate us, he said. Studies aimed at helping to conserve coral reefs have been underway since 2019 in the Arakan coastal area, according to the WCS.

URL: <https://www.eurasiareview.com/17112020-myanmar-proper-disposal-of-fishing-nets-emphasized-in-coral-reef-conservation-efforts/>

Myanmar: Raises trade target, aims to grow agri-exports this year

Myanmar is forecasting higher trade volumes in fiscal 2020-21 compared to the previous year despite potential setbacks from COVID-19, said U Khin Muang Lwin, assistant secretary from the Ministry of Commerce under the National League of Democracy government. The ministry is expecting trade volumes to reach US\$34.7 billion in the current fiscal year, with exports dropping to US\$16.2 billion and imports adding up to US\$18.5 billion, lower than last year. In fiscal 2019-20, trade volumes amounted to US\$36.6 billion, higher than the ministry's US\$33 billion forecast, with exports totalling US\$17.6 billion and imports reaching US\$19 billion. This year's exports will be supported mainly by agriculture, livestock and fisheries, which are expected to offset a decline in garment manufacturing due to COVID-19. Myanmar's garment exports declined by more than US\$60 million in fiscal 2019-20 compared to the previous year and will continue to be under pressure in the current fiscal year, said U Khin Muang Lwin. Garment exports in 2019-20 were valued at \$4.8 billion.

This year so far, revenues have totalled just US\$ 87 million, which is a decline of more than US\$172 million compared to the same period last year. In contrast, demand for crops such as corn has increased and bean exports are expected to be stable on higher margins. Meanwhile, demand for fisheries has also been on the rise since last year. “Trade volumes are forecast to increase this year and despite the uncertainty around COVID-19, we will raise efforts to exceed our forecasts, U Khin Maung Lwin said. “We will take action to promote our best crops internationally, including rice, corn, fruits and beans, he said, adding that similar efforts will be made to promote Myanmar fisheries and livestock, as “these areas have good export potential. But local traders are sceptical, saying there are challenges that have to be addressed on multiple fronts, such as unpredictability at the Myanmar-China border gates, volatile international demand, as well as the weaker dollar exchange rate, which have all led to unstable prices. “World trade is affected due to the COVID-19 pandemic and export income may not be as good as previous years. Already, there are farmers who have stopped growing certain crops due to weaker demand, said U Thein Aung, Chair of the Myanmar Farmer Development Association. Myanmar needs to make preparations and arrangements to increase trade volumes as it might face setbacks due to COVID-19 in fiscal 2020-21, said U Than Myint, Minister of Commerce under the National League for Democracy government, during a virtual conference in late October. Myanmar can further increase exports by producing value-added products which are competitive in price and quality, he added. Myanmar recorded a trade deficit of US\$1.3 billion in fiscal 2019-20, up from over US\$1 billion in fiscal 2018-19.

URL: <https://www.mmtimes.com/news/myanmar-raises-trade-target-aims-grow-agri-exports-year.html>

Myanmar: Thousands of Myanmar fishermen denied chance to vote

Nearly 9,000 fishermen in Pyapon Township, Ayeyarwady Region, will not vote in the Nov. 8 election as they have been at sea since the fishing season started in September. There are 8,851 fishermen officially registered with Ayeyarwady Region Fisheries Department on rafts off Pyapon, where the main business is fishing. As the fishermen were not able to check voter lists and they went to sea before the electoral bodies organized early voting, they will lose their voting rights as the rafts have no plan to return to shore on Nov. 8. U Thein Swe, a National League for Democracy candidate for the regional parliament in Pyapon, told The Irrawaddy: “The fishermen are not all residents as many are migrants. If they are on the voter lists, they can cast ballots on election day. But if they are at sea on election day, they cannot vote. The nature of the job makes it difficult for them to vote. The rafts in Pyapon attract thousands of migrants from other parts of Ayeyarwady and the country.

The regional Fisheries Department said it granted 202 fishing raft licenses for the 2020-21 fishing season. A license includes the operation of 10 rafts and a tugboat. There are 2,020 fishing rafts operating this season with 8,851 personnel. Normally, rafts leave in September and return to shore in April. Ayeyarwady Region Sub-Election Commission chairman U Aung Myint said: “We have not received instructions regarding voting by fishermen. If the issue is raised, we will report it to the Union Election Commission. Raft owners said they have difficulties bringing the rafts back to shore for voting on Nov. 8. A raft owner in Naukmee village, who asked not to be

named, said: “We give advance payments for five months before they went to sea so their families can make ends meet. So if the fishermen run away when we bring them to shore to vote, it will cause a lot of trouble. So it is inconvenient for us to bring them back to shore. Pyapon is Myanmar’s main producer of fish paste, dried fish and shrimp.

URL: <https://www.irrawaddy.com/elections/thousands-myanmar-fishermen-denied-chance-vote.html>

Myanmar: Climate change vulnerability assessment of Labutta Township Ayeyawady Region, Myanmar, 2016-2050: Scenarios for resilience building

This assessment analyzes the vulnerability of the ecological, infrastructure and socio-economic conditions of Labutta in relation to the present and projected climatic conditions. It concludes that vulnerabilities in Labutta are currently high and that changes in climate will require decision-makers in Labutta Township to plan for increased coastal flooding, warmer temperatures, more frequent extreme heat days, greater amounts of rain within a shorter monsoon season, salinization of water sources and agricultural land, and erratic rainfall patterns during other seasons. Based on these findings, required actions for building resilience over the mid to long-term are in the Annex 1. In 2016 the Myanmar Climate Change Alliance, comprised of UN-Habitat, UN-Environment and the Ministry of Natural Resources and Environmental Conservation, in collaboration with WWF and Columbia University conducted a detailed climate change vulnerability assessment of Labutta Township. Labutta is located at the southern tip of the Ayeyawady Delta Area region in Myanmar and is home to around 315,000 people. Characterized by a deltaic environment, it has a predominantly flat topography, and suffered greatly in terms of damage and lives lost from Cyclone Nargis in 2008. Labutta is still struggling to recover from its effects, especially in rice production. The study analyses current vulnerabilities, and by projecting changes in climate, anticipates further vulnerabilities in the future up to 2050. On this basis, it proposes scenarios that describe potential impact of climate change, and issues recommendations for adaptation to avoid the worst case future scenario. It also describes the expected outcomes and results, and prioritized activities that communities identified during the course of the assessment.

The study projects changes in climate for the township, to a 25-kilometre spatial resolution. Projections show an increase in temperatures by as much as 2.3°C in 2050, with up to 17 more hot days per year. Rainfall patterns are also projected to change, with a possible increase in rainfall during a shorter rainy season, meaning more frequent heavy rainfall events. Strong winds and cyclones are also expected to increase, because of higher temperatures, more evaporation and a greater moisture level in the atmosphere. Finally, salinity is also a critical challenge. Labutta has two salt lines: A permanent salt line, below which the land and groundwater is saline, and a seasonal salt line, in which land and groundwater is saline in the dry season. These salt lines are moving north and east, affecting a greater number of people. The assessment projects up to approximately 40 centimetres of sea-level rise by 2050, which will increase the area of salt infiltration, and cause more frequent and more intense inundations and floods. The assessment shows that decision-makers in Labutta Township will need to plan for increased coastal flooding, warmer temperatures, more frequent extreme heat days, greater amounts of rain

within a shorter monsoon season, and unknown rainfall changes during other seasons. In current conditions, the study demonstrates, Labutta Township is insufficiently resilient to the present climate conditions, and its vulnerability will increase greatly because of the projected future changes in climate if no adaptation actions are taken. This is mainly due to the current socio-economic; infrastructure and ecological system conditions, and the expected impact of climate change on these systems. In particular: Labutta's economy is not diversified and up to 72 per cent of people depend on highly climate-sensitive agriculture and fisheries for their livelihoods, which on average provide incomes well below the minimum wage, while people have little training in other trades and professions. Agriculture is affected by salinity, higher average temperatures, heat waves, floods, inundation, and strong rains.

As most people do not have alternative livelihoods or technical or vocational skills, migration is high, especially among young men, who are more than twice as likely to migrate than women. Climate change projections indicate that these impacts will worsen by 2050; incomes will at best stagnate and may well decline, and in this case increased migration is highly likely. Labutta has a deltaic ecosystem, which though naturally highly productive and resilient, is rapidly degrading. There was a 64 per cent reduction in mangrove coverage area between 1978 and 2011, mainly due to land conversion for agro-industry and cutting for domestic fuel use. Mangrove ecosystems provide multiple critical services: protecting people from waves, providing habitats for fish, regulating erosion and salt infiltration, and providing construction materials and fuel-wood for cooking. With the current trends – and the further effects of climate change on flora and fauna – mangroves could be entirely lost by 2019. This will increase the sensitivity of communities to the adverse climatic effects. Infrastructure in Labutta is not adapted to strong winds and floods, and unable to withstand the effects of tropical storms and cyclones, and is further at risk from projected changes in the future. Housing and basic service infrastructure primarily uses non-resistant local materials; in some areas, up to 97 per cent of houses use local materials, while the network of disaster resilient life-line buildings, such as cyclone shelters, only cater for 10 per cent of the total population. Schools, health facilities and other public buildings are also not adapted to withstand severe climatic events. A network of waterways provides mobility for people in Labutta and sustains commerce and connectivity to Pyinsalu, in the south, to Labutta Town in the north and from east to west.

However, the combined effect of up to 41 centimetres of sea-level rise and heavy rains means that waterways may become impassable with high tides, storm surges and waves, and main roads may be inundated. Lack of effective connectivity is a severe obstacle for development and may represent a hazard for people. Drinking water in Labutta relies overwhelmingly on uncovered, rain-fed sources; around 80 per cent of people depend on such facilities for their drinking water. The shorter monsoon season, greater evaporation and salinity require improvements to rainwater harvesting and water storage to allow people to continue living in this area. The interplay of these underlying vulnerabilities with ongoing and future changes in the climate will, if not urgently addressed, leave the people of Labutta more vulnerable to disasters. The effects will be seen through more frequent loss of lives and assets, lower incomes that will drive poverty, increased migration, poorer outcomes for women and a challenging public health situation. Housing and basic service conditions will also worsen, driven by changes in the climate and degraded ecosystems. Overall, without adaptation measures, climate change will be a barrier to socio-economic development as Labutta is not resilient at present.

THE ASSESSMENT PRESENTS THREE POSSIBLE FUTURE SCENARIOS FOR THE YEAR 2050: A. The business as usual scenario, in which authorities and communities do not recognize the urgent need to address different aspects of vulnerability. Therefore, changes in climate have an exponential effect on the three systems analysed in this report; socio-economic, infrastructure, ecological and ultimately affect people's life, livelihoods, health, and safety by 2050. In this scenario, insufficient planning capacities and governance, negate mid to long-term planning. Decisions are taken to respond to short-term needs; such as allowing cutting mangroves without replanting; constructing infrastructure where inundation may occur; or failing to construct houses with storm-resistant techniques, but with long-term negative consequences. Under this scenario, livelihoods, infrastructure and environmental conditions will not allow people to improve living conditions in the township. In addition, projected changes in the climate will interact with and exacerbate the existing vulnerabilities and as they do, new, unforeseen vulnerabilities may also emerge. B. The resilience is built to maintain current living standards scenario, in which the township and communities recognize the urgent need to take action, but also recognize investment, time, economic, technical and skill constraints.

In this scenario, an adaptation plan is adopted, and activities that can be implemented without large investment are consistently undertaken, such as the protection of the environment; the strengthening of economic associations to create a more resilient livelihood and income; the integration of measures for strong winds in housing and schools; the improvement of water-harvesting, among others. Under this scenario, decisions on land-use and town-planning would need to take into account current and projected climate risks, to prevent hazardous situations, such as infrastructure being constructed near flood-prone areas and the need to clean drainage infrastructure inter alia. In this scenario, the township and communities are able to plan their adaptation needs considering climate constraints, and communicate them to the districts, states and regions, NGOs and development partners. This scenario is the minimum required to prevent increased vulnerability, and to enable continued development. C. Resilience is built that enables economic and social development despite changes in climate by 2050, considering the different vulnerabilities of both men and women, in which effective, strategic planning, resources, coordination, and time is assigned not only to maintain basic safety conditions, but to achieve development goals.

Based on this assessment, the first of its kind in Labutta, planning work that follows is strategic, and guides the township planning, the budget request to the district and other authorities. It requests investment from national authorities and international partners, to achieve three main results: 1) A healthy ecosystem is maintained and enhanced, to protect and provide for people; 2) A diversified, inclusive and resilient economy, to enhance the economic conditions of the township; 3) A resilient infrastructure and connectivity, that protects and enables people. In this scenario, efforts are sustained in an inclusive manner over a long period of time, and by a number of actors, but particularly the local and national government. To make the findings of this report actionable, a climate change resilience action plan should be developed and adopted at the township level. To this end, the assessment mobilized communities to identify expected adaptation outcomes and results, and priority potential activities to pre-empt Scenario A from materializing and instead promote a more resilient Labutta by, at the very least, achieving the conditions of scenario B, and working towards scenario C. The results of these consultations are

included in this report, and they should be used as a basis to initiate adaptation in Labutta township (Annex 1). Full report is available at:

<https://reliefweb.int/sites/reliefweb.int/files/resources/Climate%20change%20vulnerability%20assessment%20of%20Labutta%20township%20Ayeyawady%20region%2C%20Myanmar%2C%202016-2050%20-%20Scenarios%20for%20resilience%20building.pdf>

URL:

<https://reliefweb.int/sites/reliefweb.int/files/resources/Climate%20change%20vulnerability%20assessment%20of%20Labutta%20township%20Ayeyawady%20region%2C%20Myanmar%2C%202016-2050%20-%20Scenarios%20for%20resilience%20building.pdf>

Myanmar: Marine exports hit by COVID-19, falling dollar

Myanmar's exports fell by more than US\$300 million at the start of the new fiscal year compared to the same period last year, according to the Ministry of Commerce. Exports earned \$132.18 million during October 1-9, compared to \$455.11 million in the same period last year. Industrial finished-product exports earned over \$45 million, down from \$196 million in the same period last year; mineral exports earned \$17 million, down from \$132 million; agricultural exports earned \$43 million, down from \$78 million; and marine products earned \$20.16 million, down from \$27.44 million. Myanmar's marine-product exports fell because of low foreign demand and logistics problems at the border, said U Ye Min, executive of the Myanmar Marine Products Producers and Exporters Association. Since the COVID-19 lockdown began, marine-product exports have declined to about 10 containers a week, partly due to the steadily falling US dollar. "There are few foreign orders, and it's even worse than April. Exports by both land and sea aren't in good shape, he said. Up to the Thingyan holiday last year, 60 percent of marine products were exported by land, but now they are declining due to logistics problems. "The delays at the borders have resulted in rising supply in the country. Even fish farmers are having problems due to falling prices, he said. Baho Sanpya fish market in Yangon has closed owing to the COVID-19 outbreak.

URL: <https://www.mmtimes.com/news/myanmar-marine-exports-hit-covid-19-falling-dollar.html>

Myanmar: USAID fish for livelihoods launches Shwe Ngar mobile phone app for fish farmers

The United States Agency for International Development (USAID) Mission Director in Myanmar, Ms. Aler Grubbs, launched the newly developed Shwe Ngar (Golden Fish) mobile phone application (app) for fish farmers in a virtual event. U Nyunt Win, Director, International Relations and Projects Ministry of Agriculture, Livestock, and Irrigation Department of Fisheries, and U Win Kyaing, Secretary-General, Myanmar Fisheries Federation, and representatives of WorldFish also spoke at the event. The Shwe Ngar app will provide fish farming families with timely information on how to stock and feed fish, fish health, and aquaculture technologies, as well as nutrition, water, sanitation, and hygiene practices.

The app will also connect fish farmers to suppliers, traders, and others in order to strengthen the aquaculture-based food system in Myanmar. Access the app at this link. “Innovative technology for agriculture can help to make economic growth accessible to everyone. This app launch is part of a larger effort to improve value chains, so that more food-safe fish and fish products can reach local markets. This project focuses on integrating communities in Shan and Kachin states, Sagaing and Mandalay regions, into stronger aquaculture value chains to support inclusive economic growth in Myanmar, said Ms. Aler Grubbs, USAID Mission Director. Fish accounts for 60 percent of the animal sourced food consumed in Myanmar. The amount of wild fish being caught from fresh- and saltwater in Myanmar is declining. Myanmar must develop a sustainable aquaculture industry to meet the growing demand for fish. Sustainable, environmentally responsible aquaculture minimizes potential environmental impacts to wild fisheries and ensures aquaculture practices are socially acceptable and economically sound. The Shwe Ngar app was developed by the Fish for Livelihoods project, which is implemented by WorldFish and funded by USAID. Fish for Livelihoods is an initiative to increase fish production, labor productivity, food availability, and fish consumption, especially for women and children from vulnerable households in Myanmar. The Shwe Ngar app and the Fish for Livelihoods Project are part of the U.S. Government’s Global Hunger and Food Security Initiative, also known as Feed the Future.

URL: <https://mm.usembassy.gov/press-release-usaid-fish-for-livelihoods-launches-shwe-ngar-mobile-phone-app-for-fish-farmers/>

Myanmar: Saudi Arabia blocks Myanmar fisheries products at its ports

Saudi Arabia has seized around 30 containers of Myanmar fisheries products at its ports, said U Ye Min, a member of the Myanmar Fisheries Products Processors & Exporters Association. He said the Saudi authorities would not permit the products to enter the country and the containers have been left at the ports. The fisheries in each container are worth up to US\$80,000. “It is not because of COVID-19 that the goods are being held back. We understand that the Saudi Arabia Food & Drug Authority (SFDA) changed its policy on accepting Myanmar products, he said. “Despite the announcement, goods were still shipped after private negotiations between the departments from both sides. We exported freshwater fish to Saudi Arabia as agreed and this problem occurred only when the goods arrived at the ports, he said. Saudi Arabia was once the biggest importer of Myanmar fisheries. The country banned imports from a handful of ASEAN countries, including Myanmar, since April 2018, after it detected some bacteria on marine products from Vietnam. However, marine products that meet Saudi Arabia’s cold storage and processing standards were permitted from Myanmar last year.

The Myanmar authorities have contacted the Saudi Foreign Ministry via the Myanmar Embassy in Riyadh to negotiate permission for the containers to enter the country. Myanmar’s requests in the negotiations include Saudi Arabia accepting the containers and removing any remaining restrictions on Myanmar fresh-water fish imports. It also asked the Saudis to approve exports from Myanmar marine factories as only one out of 19 factories has received Saudi approval so far. U Ye Min reckons the containers will likely be accepted. “The goods will go bad by the time they are returned, he said. Myanmar exports marine products, such as fish, prawns, and crabs, to

markets in 40 countries, including China, Saudi Arabia, the US, Japan, Singapore, Thailand, and countries in the European Union. Export earnings from the fisheries sector up to September 11 in the last fiscal year totalled US\$810.9 million, an increase of US\$119.8 million from the year before, according to the Ministry of Commerce. There are 480,000 acres of fish and prawn breeding farms in Myanmar and more than 120 cold-storage facilities in the country.

URL: <https://www.mmtimes.com/news/saudi-arabia-blocks-myanmar-fisheries-products-its-ports.html>

Myanmar: Asean needs to act on Mekong River

Two events happened last month that went largely unnoticed by most of the mainstream media in Southeast Asia. One was the third Lancang-Mekong Cooperation (LMC) Leaders' Meeting between China and the five Mekong members of Asean — Cambodia, Laos, Myanmar, Thailand and Vietnam. The other was the inaugural Mekong-US Partnership Ministerial Meeting between America and the same Asean countries. At the LMC Leaders' Meeting, Chinese Premier Li Keqiang pledged to share water management data from its portion of the Mekong River — also known as the Lancang River — for the whole year with the rest of the Mekong countries. This is a welcome change for the downstream Asean countries, particularly after a historic drought crisis in 2019 where the water levels in the Mekong River fell to their lowest in more than 100 years. While this is partly driven by the impacts of climate change, experts believed that China's 11 hydro dams in the upper stream of the Mekong River had something to do with it and other drought disasters in the last two years. In the past China has only shared its water data during the wet season from June to October.

Beijing's shift in its position reflects greater sensitivity to the needs of its Mekong counterparts with Premier Li saying that China will respect the "legitimate rights and interests of Lancang-Mekong countries to rationally develop and utilise water resources". It also follows in the heels of heavy criticisms by US officials and a damning report on China's manipulation of the Mekong River by US-based research company Eyes on Earth. Meanwhile, at the Mekong-US Partnership Ministerial Meeting, US State Secretary Mike Pompeo launched the Mekong-US Partnership and pledged to provide at least US\$153 million (about 4.8 billion baht) for joint projects. The partnership expands on cooperation begun in 2009 under the Lower Mekong Initiative which is aimed at strengthening the autonomy, economic independence, and sustainable development of the Mekong partner countries. US renewed commitment and fresh funding to the Mekong subregion has been welcomed by the Asean Mekong countries but whether that translates into viable alternatives for them as they recalibrate their positions vis-à-vis China remains to be seen.

The Mekong subregion is quickly turning into a new battleground for US-China rivalry. This year saw a string of barbs exchanged between the US and China. A senior US diplomat, David Stilwell, said in an online webinar that China was "manipulating" the Mekong River "for its own profit [and] at great cost to downstream nations". China has outrightly rejected claims that it is holding back water from the millions of people living downstream who depend on the ebb and flow of the Mekong for their livelihoods. Yet compared to Asean's troubles in the South China Sea, the Mekong issues have not attained a "regional" status that allows for them to be discussed

among all Asean member states. As the Asean chair for 2020, Vietnam has tried to put the Mekong issues on the regional agenda but the Covid-19 pandemic crisis has shifted the region's attention to focus on public health and economic recovery, thereby narrowing Vietnam's window of opportunity to do so this year. As Vietnam prepares to hand over the chairmanship to Brunei for 2021, there is a risk that the Mekong issues will continue to remain under the radar of Asean, as they have so far, with potentially disastrous consequences for the region as a whole. The troubles over the Mekong River have been largely viewed through an environmental and socio-economic lens affecting only the mainland countries of Asean. Its linkages with the region's broader security and geopolitical considerations have been given less attention.

The Mekong River basin is home to the largest inland fishery in the world and more than 60 million people depend on it for their livelihoods. In the last two decades, there has been a rush of hydro dam construction on the river, with the hope of generating renewable energy for the region. China has built 11 dams on the Lancang River with another 11 mainstream dams in the lower Mekong and 120 dams in the tributaries in the pipeline. The impact on fisheries and rice crops in the downstream countries have been devastating and are well-documented. Following the 2019 drought crisis, experts have also sounded the alarm on the eventual collapse of the ecosystem in the Mekong basin. Sadly, the costs of the damming of the Mekong have been largely borne by the local communities. The loss of livelihoods and increased food insecurity have driven many to migrate as a result. Forced displacement brings with it other human security problems such as human trafficking, drug trafficking and other forms of organised crime, which undermines regional stability and economic development. A recent assessment by the Asean-ISIS Network of think tanks highlights the risk of looming dual crises as the interconnectedness of security threats increases e.g. pandemic-hunger, pandemic-natural disasters, pandemic-humanitarian crises, etc.

The current situation in the Mekong basin may well be the background for the unfolding of these crises. There are geopolitical considerations too. A report by Fitch Solutions says that heavy losses in fishing and farming – long regarded as primary subsistence for many local communities — as a result of dam building will force Asean countries to rely on increased food imports from China. At the same time, China's plans to create a water superhighway for commercial cargo through the Mekong “rapids blasting” project has been controversial. While the project has been implemented in stretches of the Mekong in China, Myanmar and along the Lao border, it has met with strong resistance from Thai Mekong communities and environmental groups in the last two decades, culminating in the termination of the project by the Thai cabinet early this year. It remains to be seen how long Thailand can put a pause button on China's long-term plan to deepen the Mekong River for trade. There are significant corporate and geopolitical interests in transforming the Mekong River into an industrial water corridor between China and the Mekong countries of Asean. On top of that, China's massive trade with and investments into the Mekong region and its pledge of US\$300 million to the LMC Special Fund makes it hard for Asean countries to turn away from China. The strategic importance of the Mekong River to Southeast Asia calls for an urgent and new approach from Asean.

Beyond Vietnam, future chairs of Asean should support the inclusion of the Mekong issues into the grouping's regional agenda. In addition, the idea of reviving the Asean troika mechanism should be considered as way to address pressing issues such as the Mekong issues in a timely

and focused manner. The current Asean country coordinator of Asean-China Dialogue Relations, ie the Philippines, should proactively include the Mekong issues into future discussions with China. It is also in the interests of Asean to promote greater coordination and collaboration between the LMC and other intergovernmental mechanisms such the Mekong River Commission. More fundamentally, Asean needs to focus on narrowing the development gaps between the more developed economies of Asean and countries such as Cambodia, Laos and Myanmar. This is to avoid any country being trapped in Beijing's orbit with repercussions on Asean's ability to act cohesively on key regional issues. In the words of Singapore's Ambassador-at-Large Bilahari Kausikan, Asean needs to "discard a narrow transactional approach towards Mekong issues and think about Southeast Asia holistically as one strategic theatre". The importance of the Mekong to Southeast Asia demands a timely and decisive response from Asean. In the absence of this, Asean's centrality will be further impaired and the region's stability and growth in the long-term will be challenged.

URL: <https://www.bangkokpost.com/opinion/opinion/1994067/asean-needs-to-act-on-mekong-river>

Myanmar: Unemployment among fisher communities was reported to the extent of 70%

A rapid assessment study showed that more than 80% of household in study villages subjectively anticipated that the community may need relief food, cash assistance, livestock, and emergency agriculture assistance in one to three month's time if COVID-19 situation continues. Job losses due to restriction of movement, absence of markets are also found to be factors affecting the income sources for farmers and agriculture labour households. About thirty per cent of households reported having food shortages. A safety net in terms of social protection, cash for work, and nutrition security for children through school meals programme are some of the interventions that can help small farmers and agriculture labour families. Yet another assessment by FAO partner Fishadapt among fisher communities of Ayerawaddy, Rakhine and Yangon has identified that 23 per cent of households surveyed reported food shortages during the months of April-May 2020. About 64% reported a decline in the market prices of fish. Unemployment among fisher communities was reported to the extent of seventy per cent. In Ayeyarwaddy 50% of the communities reported difficulties with transporting fish catches (17%) and gaining access to markets (33%), in Yangon region 40% of communities reported difficulties with transportation and 10% with market access and a further 10% reported they were unable to fish regularly. However in this study government assistance appear to have reached to about 75 per cent of communities studied which reflects the unevenness of relief distribution. Both the studies point out that strengthening agriculture and fisheries investments in production and marketing supply chains is one of the surest ways to address food insecurity at the local level.

There have been reports from various agencies including INGOs and technical agencies like IFPRI about the on the ground situation with respect to the impact of COVID-19 on the well-being of people living in rural areas. All of them point towards precarity and vulnerability of rural livelihoods. A rapid assessment on impact of COVID-19, conducted in the month of May 2020, in the townships of Mandalay, Chin and Ayerawaddy by the FAO partner project (SLM-GEF) identify that agricultural credit is critical for many farmers in order to resume their farming

operations. Indebtedness is already high for the vast majority of farmers even before COVID-19, and the pandemic had exacerbated the need for additional cash for farming and household consumption as the repayment burden prevents them from accessing loans or increases the cost of borrowing. Uneven presence of micro finance institutions and banks also makes it difficult for farmers to take institutional credit and their reliance on informal finance means incurring high costs of borrowing with interest rates ranging from 28% to 120% per annum. All these reflect the vulnerability that farmers face in terms of agricultural operations in the aftermath of the pandemic. The recently concluded 35th Asia Pacific Regional Conference of Food and Agriculture Organisation (FAO) hosted by Bhutan, the first being held in virtual form, expressed concern that the COVID-19 induced economic downturn and subsequent measures taken by countries combine to push hundreds of millions of people into hunger, poverty and acute food insecurity and malnutrition, reversing a decade or more of developmental progress.

According to a press release from the FAO Myanmar, the Director General of Planning Department of Ministry of Agriculture, Livestock, Fisheries and Irrigation of Government of Myanmar emphasized that “We are actively engaged with partners in Myanmar as well as with stakeholders to find solutions to mitigate the economic and social impacts of COVID-19 and “the priorities of the Ministry reflect our commitment to support, stabilize and strengthen development to support a good quality of life for the people of Myanmar. The FAO Asia Pacific Regional Conference, held September 1-4 and attended by over 400 representatives from 46 member countries, acknowledged that most countries of the region acted promptly and responsibly to cushion the impact on vulnerable populations, by rolling out social protection measures and safety net schemes to shore up food security, counteract the impacts of joblessness, and provide financial support to small businesses. These have given immediate relief to some extent, however long term recovery needs systemic interventions in the agriculture and food sectors. In Myanmar, the government has taken quick steps to assist the poor and the needy through cash transfers. Recognising the importance of agriculture, as part of economic recovery plan, CERP specifically identified strategies that ‘support farmers, small agri-processors, seed farmers and agri-businesses for planting and income retention’. Activities identified included ‘loan support to farmers, market connectivity and improvements in productivity through extension services.

All these are expected to build resilience in the agriculture sector and there by ensuring food security. While on the production front there was limited impact in the early months, agriculture trade and exports have been affected significantly due to the lockdown measures, closure of borders and movement of goods. Border trade in agriculture commodities appears to have been affected significantly over the past four months, although there is a turnaround in the most recent period. Speaking at the conference, Myanmar’s representative pointed out that “We are cognizant of the challenges ahead of us. We will continue to pay close attention to food security and nutrition, sustainable agricultural and rural development, building resilience of food and agriculture systems in the face of crisis. It is important to at this stage to identify trends at the micro level in order to assess how long term policies are to be designed and implemented. FAO’s Regional Assessment Analyzing the situation across the Asia Pacific region, FAO points out “The pandemic may accelerate the trends towards more mechanization, which will increase labour productivity but will also require investments in improved social protection and safety net programmes. These programmes may need to cover more people and provide more generous

benefits to ensure food access for all, while also reducing the administrative burden needed to access the funds. Rethinking agricultural policies in the COVID-19 context will require coherent strategies that integrate technology investments, digital literacy support and improved trade logistics to enable robust farmer-input market linkages and farmer-market connectivity and traceability down the supply chain. Further, increased trade in food over the years in the Asia Pacific region demonstrates the future long term prospects in building resilient agriculture systems that accommodate food security concerns and external trade of the countries.

There are several factors that can further contribute including free trade agreements, infrastructure in logistics sectors and efficient production. All these would help improving the food value chains and incomes for farmers. Given the importance of nutrition security, a sustainable food systems approach is also advocated especially with a focus on climate resilient sustainable agriculture practices that ensure food security of the small farmers. Measures like crop diversification and efficient nutrition management are some of the interventions in this respect. Recommendations In line with such an analysis, the FAO Asia Pacific Regional Conference identifies the importance of export-import supply chains in agriculture commodities and the need for building resilience of supply chains by increasing food production capacity, strengthening food reserves at national and regional levels, as well as improving national food logistics systems. It emphasizes the imperative to build back better through sound policies and programmes that place greater focus on resilient food systems, nutrition-sensitive food diversification, improved fisheries' sustainability given its important role in food security, particularly in the Pacific; improved storage and logistic infrastructure; leveraging of accessible digital innovations and green and climate-resilient technologies; reduced food loss and waste and improved food safety norms.

As a long term plan, the Government of Myanmar identifies COVID-19 recovery for agriculture and food security as an opportunity to rejuvenate the sector as a whole. FAO recommendations also identify the need for transformative solutions and long-term recovery and resilience through development of inclusive and participatory policies for sustainable agriculture, fisheries and food systems and natural resource management. The FAO intends to support member nations to improve mechanization, commercialization, diversification and climate-smart investments, reduce post-harvest losses and ease labour constraints which will be reinforced by innovations, digital technologies and transformation of food systems. The FAO conference identified the importance of its COVID-19 Umbrella Programme to mobilize resources for building back better and support greener agriculture that safeguard the livelihoods of smallholders and family farmers and play a strong role in the United Nations Multi-Partner Trust Fund (UNMPTF). It would be an opportunity for Myanmar to seek support from such funding opportunities led by the UN system in order to develop sustainable agriculture and food security programmes that would benefit small farmers.

URL: <http://mizzima.com/article/fao-advice-agriculture-food-security-during-covid-19-myanmar>

Myanmar: Livestock and fisheries attract foreign investment

Myanmar's Directorate of Investment and Company Administration says the country's livestock and fisheries sectors have attracted four foreign investment projects and one domestic business so far in the current financial year 2019-2020, according to the Global New Light of Myanmar. According to the report, those businesses brought in around US\$30 million, including the expansion of investments by the existing joint ventures. The ventures include broiler chicken farming, production, processing and marketing of all kinds of poultry feed, broiler hatchery, production of shrimp, freezing, and cold storage. A total of 16 countries are invested in the livestock and fisheries sector. Thailand has topped the list of investments among them, with over \$380 million in 18 enterprises, followed by Singapore with over \$129 million in 14 enterprises.

URL: <http://mizzima.com/article/myanmar-livestock-and-fisheries-attract-foreign-investment>

Myanmar: Assessing the Impact of COVID-19 on Myanmar's Livestock and Fishery Sectors

Myanmar's livestock and fishery sectors are crucial to the livelihoods of many vulnerable households, and an important dimension in improving nutritional outcomes in the country. The COVID-19 pandemic and efforts to mitigate its spread have led to disruptions in these sectors arising from declines in incomes and restrictions on movement. Careful monitoring of the impact of COVID-19 on these sectors can guide government, private sector, and development partners on policies and interventions to minimize potential disruption. This virtual policy seminar will analyze the current situation in Myanmar's livestock and fishery sectors, based on the results of recently conducted phone surveys and highlight potential actions to keep these sectors functioning during these challenging times.

URL: <https://www.ifpri.org/event/assessing-impact-covid-19-myanmars-livestock-and-fishery-sectors>

Myanmar: Govt aids 1800 hectares of fish farms

U Tun Lwin, deputy permanent secretary of the Fisheries Department, said that as of August 14 it had provided several billion fish to fish farms in 11 regions and states. He said each fish pond received K40,000 worth of fish, and the programme had cost K180 million so far. The government aims to stock over 27,000 hectares of fish ponds in Yangon Region, over 22,000 hectares in Ayeyarwady Region and around 8000 hectares in Bago Region. There are 27 fish spawning stations under the Ministry of Agriculture Livestock and Irrigation, but much more fish are required by the programme than the stations can produce, so a public tender will be called in Yangon and Ayeyarwady Regions. The ministry estimates it will stock over 60,000 hectares of fish ponds around the country at a cost of about K6 billion by the end of September.

URL: <https://www.mmtimes.com/news/myanmar-govt-aids-1800-hectares-fish-farms.html>

Myanmar: Taninthari Region plans to export marine products to Thailand

Although all industries in Taninthari Region temporarily suspended during COVID-19 outbreak, plans are underway to export marine products from Taninthari Region to Thailand, according to the announcement of the Ministry of Agriculture, Livestock and Irrigation. In order to increase foreign income of the trading sector, three cooperative associations in Kawthaung Township, Taninthari Region exported their fishery products to the abroad. So, they had earned US\$4.6 million from export of fishery products in 2019-20 fiscal years. At present, Myanmar earned over US\$750 million from fishery exports during 10 months of this fiscal year, according to the report of the Ministry of Commerce. The Fishery Department under the ministry of Agriculture, Livestock and Irrigation is now working with the fish processors and exporters to ensure Myanmar fishery products meet the rules and regulations of importing countries including the European countries.

URL: <https://elevenmyanmar.com/news/taninthari-region-plans-to-export-marine-products-to-thailand>

Myanmar: A fish market is needed in Tanintharyi that can earn tax revenue for the country and benefit marine workers

Some government officials were allegedly trying to extort money from businesses wanting to export marine products in Tanintharyi Region, according to local people who have asked legislators for help. The business people said that if they do not pay bribes, the inspectors will delay their shipments, sometimes causing the products to spoil. “We told parliament that the government is losing tax revenue on fisheries, said U Zaw Hein, an Amyotha Hluttaw (Upper House) MP for Kyunsu township. “A fish market is needed in Tanintharyi that can earn tax revenue for the country and benefit marine workers.” U Than Chaung, head of the region’s Fisheries Department, said they inspect all vessels suspected of smuggling marine products. Regional officials estimated that Tanintharyi losses K30 billion (US\$20 million) annually due to marine product smuggling. In Kachin State, an Amyotha Hluttaw legislator called on the government to stop a pro-government militia group from extorting money from travellers. Zel Khaung, MP for Kachin’s constituency 3, said the Pangwah militia had a checkpoint where they collected money from all passing vehicles on a 50-mile stretch of the highway connecting Waingmaw and Chipwe townships. “The militia asks drivers for K10,000 to K20,000 for meals, he said, “and threatened to shoot those who do not give them any. Deputy Defence Minister Rear Admiral Myint Nwe said the Pangwah militia is comprised of local villagers and helps the government maintain security in the area. “Our investigation on May 30 found no checkpoints on the road except for village security, he said, “and they have been warned not to allow any extortion in their territories.

URL: <https://www.mmmtimes.com/news/alleged-extortion-activities-tanintharyi-kachin-denounced.html>

Myanmar: Strives to save endangered Ayeyarwady dolphins

A total of seven endangered Ayeyarwady dolphins in Myanmar died in seven months from January to July of this year, state-run media reported on Wednesday. “We have noticed that the death of endangered Ayeyarwady dolphins was caused by electrofishing along the Ayeyarwady river in Mandalay and Sagaing regions. In order to take actions effectively on killing of Ayeyarwady dolphins and to save Ayeyarwady dolphins, the two regions must cooperate for it, U Moe Kyaw Thu, Sagaing regional minister of Immigration and Human Resources recently said. To take actions effectively against the electrofishers, we have already conducted surveys on the electrofishing areas and water condition along the Ayeyarwady river, he said. Meanwhile, patrolling operations for the conservation of endangered Ayeyarwady dolphins along the Ayeyarwady river will be increased from one time to three times per year starting from this year, according to the Myanmar Fisheries Department. According to the department’s latest survey conducted in February this year, there were 79 endangered Ayeyarwady dolphins in the country, the department official said.

URL: <https://en.brinkwire.com/news/myanmar-strives-to-save-endangered-ayeyarwady-dolphins/>

Myanmar: Mon fishing industry awaits huge impacts as China pauses buying

The Mon State fisheries industry is at risk of stalling in the upcoming fishing season now that China has temporarily stopped importing, according to the Mon State Fisheries Federation. U Myint Soe, chair of the Mon Fisheries Federation, said China stopped importing fisheries since late June, but added that the industry has already made investments ahead of the fishing season, which commences in September and lasts for nine months. “We have already paid for the maintenance of our fishing boats and invested a lot of upfront costs before resuming the season. Some fishermen even pawned or sold their assets to do so. If the fisheries produced then cannot be sold, there will be big problems for us,” he said. Mon State has registered around 300 fishing vessels. After returning from sea, the fishing boats typically dock at the local harbour to sell off their catch. The boats sail for the Gulf of Mottama, which is classified as a wetland site under the international Ramsar Convention. The area is a good spawning site, producing a large proportion of wild-caught fish in Myanmar. Much of the fisheries produced locally are farmed. Over the past three years, the government has also been working with local fish organisations to preserve these resources and protect the fish from illegal fishermen. Recently, the Mon Fisheries Federation also highlighted the urgency to curb and control illegal trawling activities to prevent the depletion of locally spawned wild fish.

URL: <https://www.mmtimes.com/news/mon-fishing-industry-awaits-huge-impacts-china-pauses-buying.html>

Myanmar: Mangrove conservation up against socioeconomic realities of forest resources

Rakan State residents are deleteriously cutting down mangroves growing along the state’s coast to earn a living, say organisations working to conserve the valuable shoreline forests. Mangroves are deforested to sell firewood for brick-making fields and to make charcoal, said Ko Myo Lwin,

a leader of the Ann Township Mangrove Trees Conservation Group. “Villagers find it difficult to get a job for their living. Additionally, COVID-19 is one of the factors creating hardships for their living. That’s why some residents rely on mangrove forests for income, said Ko Myo Lwin. The current socioeconomic trends require that mangrove forests be conserved, he added. The Ann Township Mangrove Trees Conservation Group said residents of several townships in Arakan State including Ann, Kyaukphyu, Myebon, Taungup and Ramree are taking the ax to mangroves every day. The group is now working to reforest mangroves in Ann, Kyaukphyu, Taungup, Myebon and Pauktaw townships, Ko Myo Lwin told DMG. “Fishermen in the townships are affected by the impacts of water pollution while they are also facing difficulties to do fishing because of more prawn and fish farming. So, we plant and conserve mangrove plants so that fishermen can do fishing well in communal fishing areas, he said. The Forest Department said it compiles and updates information on mangrove forests throughout Myanmar once every five years.

The most recent tabulations, from 2015, found that Arakan State had 395,726 acres of mangroves in total. U Zaw Myo Hlaing, assistant director of the Arakan State Forest Department, said: “We will check whether mangrove forests are destroyed or not after 2020 under the Forest Department Climate Change Adaptation [FDCCA] programme. Cooperation on the project between the Arakan State Forest Department and the Danish Embassy has taken the form of financing and technical aid in Ramree and Myebon townships, the Arakan State Forest Department said. But plans to grow mangrove trees have been suspended in Myebon Township due to regional instability, while a total of 250 acres of mangroves has been planted annually in Ramree Township under the FDCCA’s five-year project, it said. In November 2019, the Environment and Mangrove Forest Conservation Group (Harp) and Humanitarian Support Network (MSN) worked together planting mangrove trees worth about K20 million (US\$14,600) at seven mangrove forests in Manaung Township. Ko Yan Naung Soe, secretary of the Rakhine State Biodiversity and Nature Conservation Association, told DMG that the RBANCA is mainly conserving mangrove forests grown near Nantha Island and the Mayyu Estuary. “We will work with residents to avoid deforestation of mangrove plants. It takes many years to become a big mangrove plant. So, we will protect mangrove plants as a first priority, he said. There are about 300 acres of mangrove forest near Nantha Island and the Mayyu Estuary, RBANCA said. In addition to being sold as firewood and charcoal, mangrove plants are also cut down to develop areas for prawn or fish farming, or to make way for dams, destroying the habitats of aquatic wildlife, mangrove conservation activists said.

URL: <https://www.bnionline.net/en/news/mangrove-conservation-against-socioeconomic-realities-forest-resources>

Myanmar: Over \$720m earned from fishery export in over 9 months

More than US\$720 million has been earned from export of fishery products over the past nine and a half months exceeding US\$106 million compared to the same period of last year, according to data from the Ministry of Commerce. US\$722.751 million was earned from fishery export from October 1 to July 10 in the current 2019-2020 financial year. In the same period of last fiscal year, US\$616.275 million was earned, so this year saw an additional US\$106.476

million. Deputy Commerce Minister Aung Htoo said fishery export value would hit US\$1 billion yearly if domestic farming capacity could improve. In the fourth year of the current government's term, over US\$730 million was earned from export of fishery products such as fish and prawn. "As freshwater and seawater fish farming improves, we could export fisher products worth about US\$732 million in that year, the deputy minister said. Myanmar needs to try hard to compete with her neighbouring countries in exporting fishery products, according to the Fisheries Department. During the 16th meeting between Vice President (1) and businesspersons held in May 2018, Htay Myint, president of Myanmar Fisheries Federation, said modern fish farms, fish feed factory and cold storage factories would be built in cooperation with experts from Indonesia, Taiwan and China to be able to earn about US\$3 billion from fishery export.

URL: <https://elevenmyanmar.com/news/over-720m-earned-from-fishery-export-in-over-9-months>

Myanmar: Call to step up mangrove conservation efforts

The world's most productive and intricate web of life can be found in mangroves, which provide critical breeding habitats for about 75 per cent of fish species caught in the oceans. Apart from supporting the world's food systems, mangroves are the planet's protectors against the catastrophic consequences of climate change. They can store carbon 10 times as much as the terrestrial ecosystems and the specialised root systems make them natural buffer zones in coastal areas. They minimise the impacts of strong ocean waves and winds, and help reduce erosion and siltation that impact livelihoods of coastal communities. The ASEAN region is fortunate to be hosting 42 per cent of mangrove forests in the world, according to the most recent ASEAN Environment Report. But in the last four decades, the ASEAN has seen the rapid decline of this precious resource. From an estimated regional total mangrove area of 63,850 square kilometres in 1980, it has declined by 33 per cent in a span of 40 years to 42,914 square kilometres in 2020, according to the Food and Agriculture Organization Global Forest Resources Assessment. As the world celebrates the International Day for the Conservation of the Mangrove Ecosystem today, the ASEAN Centre for Biodiversity (ACB) reminds the public of the critical importance of mangroves and highlights the value of addressing the drivers that contribute to their loss and destruction. It is also vital to recognise the variety of species of real mangroves in ASEAN. Out of the 70 known mangrove species in the world, 36 to 47 species can be found in the region. This diversity coincides with the diversity of ecosystem services that this unique plant community can provide.

It is crucial, therefore, to protect the remaining mangrove forests that we have, and consider different kinds of mangrove trees that grow from our seafronts and towards our rivers and the land. The ACB actively supports the ASEAN member states in doubling actions on the ground and facilitating cooperation to attain the region's shared objectives in mangrove restoration and conservation. Recognising mangroves as part of the region's coastal and marine resources that are essential to the ASEAN people, the leaders of the ASEAN have expressly stressed the region's special focus on the conservation and sustainable management of these ecosystems as reflected in the Blueprint of the ASEAN Socio-Cultural Community 2025. We have seen gains from transformative actions done in previous years. Thailand has minimised the loss of its

mangroves comprising about 36 per cent of its coastlines, as well as that of its coral reefs and wetlands, due to grassroot efforts of the government and the private sectors. According to its 6th national report to the Convention on Biological Diversity, the government has engaged local communities and other organisations in building bamboo fences as a measure against coastal erosion, and the designation of marine and coastal conservation areas, where surveillance monitoring for the encroachment of mangrove forest and exploitation of coastal resources has been intensified. Conservation actions also need to be sustained with a long-term vision and carried out with vigilance.

The Philippines, for example, has crafted a master plan for climate-resilient forestry development for the period 2015-2028. This plan integrates rehabilitation and maintenance of degraded mangrove forests and watersheds into the overall strategy of the government to address ecosystem resilience. This also ensures the alignment and sustainability of national programmes and initiatives. Awareness-raising activities and livelihood support are also important tools in mangroves conservation programmes. The ACB and the German Development Bank (KfW) through the Small Grants Programme have recently signed a grant agreement with Myanmar Environment Rehabilitation-conservation Network (MERN) for a project that will help restore mangroves and create livelihood opportunities in Meinmahla Kyun Wildlife Sanctuary, a designated ASEAN Heritage Park (AHP) in Myanmar. Among the project's objectives are to raise awareness and build capacities of local communities for mangrove conservation and improve the state of the mangroves within the AHP through restoration activities like planting critically endangered species. Part of the solutions to our modern-day concerns like food security, climate change, and public health are in the conservation of mangrove forests. Taking into consideration their ecological and economic values, it is our duty to keep these ecosystems healthy and intact.

URL: <https://borneobulletin.com.bn/2020/07/call-to-step-up-mangrove-conservation-efforts/>

Myanmar: Denmark funded community centres for fishermen in Tanintharyi and Rakhine state in Myanmar

The Danish embassy in Denmark announced a progression on a project to establish community centres for fishing families in Tanintharyi and Rakhine state on 16 July 2020. The coastal communities in Tanintharyi and Rakhine were enabled to keep working on the establishment of the community centres amid the Covid-19 crisis. The facilities, funded by Denmark, will be used as information centres and offices for community members who are involved in the co-management of Sustainable Coastal Fisheries Programme. They will also serve as shelters for the communities from any natural disasters, including heavy storms and cyclones during monsoon season.

URL: <https://scandasia.com/denmark-funded-community-centres-for-fishermen-in-tanintharyi-and-rakhine-state-in-myanmar/>

Myanmar: Govt channels funds to support fisheries sector

Calls for support from the fisheries sector are now being heeded by the government with the latest move involving a sum of K6 billion earmarked for fish breeders. The funds are being distributed as subsidies for breeders to develop fish ponds across 150,000 acres of land, said U Ye Tun Win, Director General of the Livestock and Veterinary Department. “The work to subsidise fishery businesses impacted by COVID-19 will be complete in September, he said during a video conference with State Counsellor Daw Aung San Suu Kyi. He added that cold storage facilities will also be built in Yangon, Bago and Ayeyarwaddy, where a larger density of fisheries businesses are located. This will be set up with a US\$4 million loan from the World Bank, U Ye Tun Win said. A sum of K1.4 billion has also been allocated to support training and technology for breeders under the government’s COVID-19 Economic Recovery Plan. The funds will be distributed by September. In total, the government has allocated up to K91.5 billion to support the agriculture and livestock sector.

According to research, 40 percent of some 4900 livestock and fisheries breeding businesses have been negatively affected by COVID-19. Earlier this year, the Myanmar Fisheries Federation reported that exports had ground to a halt after international orders were cancelled as a result of the pandemic. The EU and other western countries accounts for about 45pc of Myanmar’s fisheries exports, while China and Thailand account for the remaining 55pc. The impact has cascaded down the fisheries value chain, leading to delays in transport and logistics and large quantities of spoilage. Meanwhile, the government is also raising efforts to lure investments in the sector to support growth. Last week, the Myanmar Investment Commission approved the development of a \$115 million prawn farm across 828 acres of land at Kyar Gyi Aw Island in Myeik, Tanintharyi Region. The project will be led by a Singapore-Myanmar joint venture company called South Asia Win Co. Singapore Qi Chang Group will hold a 70pc stake in the JV while Phyto Myat Aung Co will hold the remaining 30pc.

Environmental assessments have been conducted, according to U Htoo Htoo, director of Tanintharyi Region Directorate of Investment and Company Administration. During a video conference on July 7, State Counsellor Daw Aung San Suu Kyi had urged Myanmar fish and prawn traders to promote new types of fisheries products and expand the export market. She said producing value-added products like canned fish will help the industry generate new streams of revenue and diversify away from fresh fish and prawns. This would help protect fisheries businesses and prevent them from relying too much on a single source of income.

URL: <https://www.mmtimes.com/news/myanmar-govt-channels-funds-support-fisheries-sector.html>

Myanmar: Denmark continues to support Myanmar’s Sustainable Fisheries Programme

The Danish Embassy announced that Denmark continues to support on sustainable fishing in Myanmar in their official update on 2 July 2020. The statement said: “The Danish Ambassador to Myanmar, H.E. John Nielsen, reaffirmed Danish support to the Sustainable Coastal Fisheries Programme during his VDO conference meeting with the officials from the Ministry of Agriculture, Livestock and Irrigation. Mr Nielsen also welcomed the new co-chair of to the

Steering Committee of the SCF Programme, U Kyaw Min Oo, Permanent Secretary of the Ministry and shared the current update on the implementation of the programme supported by the Danish Embassy.

URL: <https://scandasia.com/denmark-continues-to-support-myanmars-sustainable-fisheries-programme/>

Myanmar: Fish and prawn traders to promote new types of fisheries products and expand the export market

State Counsellor Daw Aung San Suu Kyi urged Myanmar fish and prawn traders to promote new types of fisheries products and expand the export market during a video conference held on July 7. “There are various species of fish in Myanmar but most importers are only aware of a few. We need to create new markets for our fisheries products,” she said. In addition, producing value-added products like canned fish will help the industry generate new streams of revenue and diversify away from fresh fish and prawns, Daw Aung San Suu Kyi said. This would help protect fisheries businesses and prevent them from relying too much on a single source of income. U Myo Nyunt, secretary of Myanmar Fisheries Products Processors and Exporters Association, said the fisheries value chain in Myanmar will need to be strengthened to help the industry achieve its goal and full potential. “There are requirements like infrastructure, storage, logistics as well as technology and research required to take the industry to a new level of growth. The industry will expand quickly if government support is provided,” he said. The situation had already been improving until COVID-19 struck. In fiscal 2019-20, the fisheries industry as well as related logistics and storage businesses created jobs for more than 3.5 million people. Export volumes reached US\$782 million during the period, representing an increase of \$100 million compared to the previous period.

However, Myanmar is still lagging behind other developed countries in terms of technology and value chain, and the recent outbreak of COVID-19 has made things worse for the industry, according to the Myanmar Fisheries Federation. Earlier this year, the federation reported that exports had ground to a halt after international orders were cancelled as a result of the pandemic. The EU and other western countries accounts for about 45pc of Myanmar’s fisheries exports, while China and Thailand account for the remaining 55pc. The drop in demand affected businesses across the fisheries supply chain. For example, those operating cold storage facilities have had to shut down. Breeders and fishermen further upstream also suffered after demand dwindled. For now, a sum of K1.4 billion has been allocated to support training and technology for breeders under the government’s COVID-19 Economic Recovery Plan. The funds will be distributed by September. According to research, 40 percent of some 4900 livestock and fisheries breeding businesses are negatively affected by COVID-19, said U Ye Tun, director general for Livestock Breeding and Veterinary Department.

URL: <https://www.mmtimes.com/news/state-counsellor-urges-local-fish-breeders-expand-export-market.html>

Myanmar: Improving farming productivity in Rakhine State

Rakhine State, along the western coast of Myanmar, is home to approximately 3.3 million people, many of whom depend on agriculture, fisheries and aquaculture to make a living. However, since 2012, repeated outbreaks of armed conflicts and intercommunal violence, mostly in the central areas of Rakhine State, have led to civilian displacement. As of 8 June, approximately 70 000 newly internally displaced persons (IDPs) are being hosted in camps or camp-like settings across 165 sites in Rakhine State (Source: Rakhine State Government). Worsening the situation is the region's vulnerability to floods, cyclones and earthquakes. This combination of factors is undermining food security and threatening the agricultural productivity of hundreds of thousands of people in Rakhine State. Insecurity has led to lower production on farms. Movement restrictions due to the conflict and more recently COVID-19 government restrictions are limiting people's ability to work or to engage in production activities to earn a living. These factors combined translate into low productivity, which means that people have less access to sufficient, diversified and nutritious foods, as well as less income and reduced access to food. Other challenges that farmers face include inferior farming methods and practices, lack of labor, poor access to agricultural inputs, limited access to water during the dry season, and water scarcity due to lack of infrastructure.

By the end of 2018, with the support from the European Union, FAO began to implement the Improving Food and Nutrition Security project in the northern parts of Rakhine State – supporting communities in the Buthidaung, Kyauktaw, Maungdaw, and Rathedaung townships to rebuild and protect agricultural livelihoods. Training and equipping farmers Under this project, on 5-6 June 2020, FAO, together with the Agriculture Mechanization Department and Phyu Sin Saydanar Action Group, conducted training for over 30 farmers on basic skills related to managing, maintaining and repairing mechanized power tillers. The training was provided to equip farmers with the skills needed for maintaining and repairing the mechanized tools in use in the villages. A total of 15 machines were provided for use in 12 villages to help farmers prepare their land for the monsoon planting season. In Maungdaw, on 7-8 June 2020, FAO, together with the Agriculture Mechanization Department and Action for Green Earth, conducted training for over 30 farmers on basic skills related to managing, maintaining, and repairing mechanized power tillers. A total of 19 machines were provided for use in 15 villages to help farmers prepare their land for the monsoon-planting season.

Village mechanization committees Under this project, FAO also supported the set-up of Village mechanization committees, with the aim to strengthen community assets. These committees serve to manage the farmers' use of the power tillers. Its members, village residents, oversee the use and renting of the equipment in their respective villages. The committees are responsible for repairing and maintaining the equipment. They are also responsible for helping farmers to make use of the power tillers to increase Providing rice seed in Rakhine State Targeting 6 000 families, FAO has started the provision of rice seed in Inn Gyin Myaing and Tha Yet Kin Ma Nu Villages in Buthidaung township. FAO, together with Myanmar Heart Development Organization, People for People and Phyu Sin Saytanar Activity Group (PSSAG), has completed the supply of rice seeds and fertilizer to 4 500 farmers spread across three townships in time for the imminent monsoon planting season. Amid COVID-19 To meet new requirements emerging from the effects of COVID-19, FAO has reorganized its programming under to ensure continued delivery

of assistance where there are already high levels of need. With support from the European Union, FAO has integrated and completed a number of awareness-raising activities dedicated to COVID-19. FAO and its partners have provided face masks, soap, or alcohol-based sanitizers to farmers at the beginning of all field activities. Handwashing demonstrations have been conducted to help people understand the benefits of handwashing through practical exercises. All project activities integrate critical public health information about the importance of physical distancing and individual actions to protect oneself and others from getting sick.

Improving Food and Nutrition Security project The project Improving Food and Nutrition Security aims at restoring and protecting the agricultural livelihoods of vulnerable communities in Buthidaung, Kyauktaw, Maungdaw, and Rathedaung Townships in Rakhine State. The project is one of 10 pro-resilience projects in countries with food crisis contexts being implemented within the broader framework of the partnership programme supporting the Global Network against Food Crises. The partnership programme's goal is to enhance the resilience of populations in food-crisis contexts by strengthening the quality and frequency of food security and resilience analysis; building a body of evidence on effective options and interventions to enhance livelihoods and resilience at the country level; and bolstering stronger alliances at all levels to collectively address food crises through sustainable solutions along the humanitarian–development peace nexus.

URL: <https://reliefweb.int/report/myanmar/myanmar-improving-farming-productivity-rakhine-state>

Myanmar: Dy Minister stresses need to improve farming capacity to earn \$1bn yearly from fishery export

If Myanmar can improve domestic farming capacity, up to US\$1 billion could be earned yearly from export of fishery products, said Deputy Minister for Commerce Aung Htoo. “If we can try to improve farming capacity locally, we will be in a position soon to earn up to US\$1 billion, the deputy minister said. In the fourth year of the government’s term, the country earned over US\$730 million from export of fishery products such as fish and prawn. “As both freshwater and seawater fish farming improves, we could export fisheries worth US\$732 million last year, he added. According to the ministry data, over US\$680 million has been earned from fishery export over the past eight and a half months in the current fiscal year, exceeding over US\$100 million when compared to the same period of last fiscal year. From October 1 to June 12 in the current 2019-2020 fiscal year, US\$683.052 million was earned from fishery export. The same period of last year saw US\$581.165 million. So, this year has seen additional US\$101.887 million. According to the Fisheries Department, Myanmar still needs to do a lot more to compete with its neighbouring countries in exporting fisheries products including fish and prawn. The department suggests about improving farming rather than natural catching. During the 16th meeting between Vice President (1) and local businessmen in May 2018, Htay Myint, president of Myanmar Fisheries Federation, said modern fish farms, feedstuff factories and cold storage factories would be built in cooperation with experts from Indonesia, Taiwan and China to be able to earn US\$3 billion from fishery export. The Ministry of Planning and Finance also has loan plans for fish and prawn species, land supply and SMEs.

URL: <https://elevenmyanmar.com/news/dy-minister-stresses-need-to-improve-farming-capacity-to-earn-1bn-yearly-from-fishery-export>

Myanmar: Support to fisheries sector amidst COVID-19 should not be delayed

The government is planning to provide financial support to the fisheries sector, which is facing the economic challenges caused by COVID-19. Fishermen and aquaculture farmers have suffered from decrease in fishing price and suspension of export amidst COVID-19 while fishing suffer from lack of bait, ice, and gear and limited transportation services. Removing the barriers for the farmers is extremely important and the authorities need to intervene in order to guarantee the continuity of fish production and survival of the fish farming communities. Under the COVID-19 Economic Relief Plan, the government is planning to distribute fingerlings worth K40,000 to each acre of fish pond across the country, and the aid will reach about 150,000 acres of fish farms. Meanwhile, the Ministry of Agriculture, Livestock and Irrigation has submitted a proposal to the government to provide loans to sea fishing and aquaculture sectors including cold storage factories to help tackle the negative impact of the COVID-19 outbreak so as to recover quickly during the post COVID-19 period.

Needless to say, farmers of all sorts play an integral role in ensuring food security and in earning foreign currency for our country. Therefore, in the short-term, they must be given all necessary assistance promptly. We suggest that assistance including SME loans for the fish farmers should not be delayed. Our country has the largest fishery resources in Asean, but productivity is the lowest. Vietnam produces around US\$10 billion [14 trillion kyats] worth of marine products [annually]. But, our production is worth just \$720 million [1 trillion kyats]. In our fishing industry, we now have many factories that meet European Union norms. While our understanding of the implications of the pandemic is still incomplete, there is a need to look at the international market. We should also seek ways to effectively support the export sector, which can recover quickly and will bring quick wins in our country's economic recovery. As the fisheries sector plays a vital role in food and livelihood security, we emphasize the need for rapid mobilization by all parties in support of the fisheries sector. Short-term responses must be swift and targeted to the most vulnerable. In the longer-term, there is a need to develop a coordinated response and support network to transform existing institutions, supply chains, and food systems in ways that improve conditions and resilience of the fisheries sector.

URL: <https://www.globalnewlightofmyanmar.com/support-to-fisheries-sector-amidst-covid-19-should-not-be-delayed/>

Myanmar: Fisheries sector calls for government rescue amid COVID-19 fallout

Myanmar had its sights set on a record-breaking year for fishery exports until the coronavirus pandemic swept away orders, closed factories and jeopardised millions of jobs. Now industry sources say the sector needs government support to remain strong and survive well into the future. However, private sector stakeholders and the government offer vastly differing

assessments of the impact of COVID-19 on the fisheries industry, one of the nation's most important export earners. The Department of Fisheries under the Ministry of Agriculture, Livestock and Irrigation believes the sector has continued to thrive despite COVID-19, and has figures to justify its rosy assessment. They show exports are strong and rising, averaging just over \$81 million a month in the fiscal year beginning last October, up from \$60.16 million a month in 2018-19. Exports in the eight months to the end of May totalled US\$651 million, compared to \$722 million for the entire previous fiscal year and \$700 million in 2017-18. But industry figures poured water over any suggestion Myanmar could meet a \$1 billion target set last year.

They say exports began to slump from February, as buyers cancelled orders and Myanmar factories, including processing plants, were forced to temporarily close due to COVID-19 prevention measures. Sinking feeling U Myint Zin Htoo, deputy director-general of the Department of Fisheries in Nay Pyi Taw, said that since the start of the fiscal year in October there had been no decline in fisheries exports through border trade or normal trade, which involves transporting products by sea or air. Although an annual offshore fishing ban from June to August to conserve fish stocks has already begun, he said "there are fishery products in cold storage to be exported, as well as the catch from inshore fishing. "I'm quite confident export earnings will at least equal that of the previous fiscal year, he added. The private sector is not so hopeful – particularly the marine fishery, or seafood, industry, whose exports mainly go to the European Union, United States, Japan and Hong Kong.

The sector has been badly affected by transport disruptions and the consequences of other measures imposed since March to prevent the spread of the coronavirus. Although trawler owners have benefited from lower operating costs because of a fall in fuel prices, weak demand has made it difficult to sell their catch at the anticipated price when they return to shore, say industry sources. For them, the causes are two-fold. Seafood processing companies have been hit by a shortage of orders from international buyers, but the domestic market has also been affected by the closure of restaurants and hotels, and a general drop in consumer spending. The effects of the pandemic on the fishery sector began being felt in late February but industry sources said April was the worst month. U Hnin Oo, deputy chair of the Myanmar Fisheries Federation, said that despite positive government figures he estimates that export earnings could decline significantly compared to the last fiscal year because of the impact of COVID-19 on normal trade. "Since the start of the fiscal year we have been trying to reach \$1 billion in export earnings, but COVID-19 has dashed our hopes as demand in all markets has dropped, Hnin Oo told Frontier. "There have always been differences between the department's data and the actual situation on the ground, he said. "It's really hard to know the real income of exports in the private sector. U Win Kyaing, secretary of the MFF, estimated the volume of normal trade fell by up to 80 percent in April and the amount of airfreight exports dropped to zero for the whole month due to flight bans. "Although we can say the worst is over, the situation remains far from normal because prices and volumes are not stable yet, he said. Despite the apparent impacts, the fisheries sector has not yet received any specific support from the government. A K100 billion (\$70 million) COVID-19 fund offering one-year emergency loans at 1 percent interest has focused mostly on micro, small and medium sized enterprises in the garment and tourism industries. Job losses At the Golden Bay Ltd seafood processing plant at Yangon's Insein Township, orders began drying up in March as lockdowns began to hit its export partners in

Europe. Meanwhile, its smaller stake in the domestic market also collapsed after the closure of restaurants and hotels during the month, said its managing director U Myo Nyunt. Golden Bay stopped processing in April but is continuing to pay full salaries, he said. “COVID-19 affected our entire supply chain, he added.

“Exporters that buy fish and shrimps from the marine fishery have problems when they have no export orders; we cannot sell those products domestically as most Myanmar prefer freshwater fish and shrimps. Fish from the sea are also more expensive. Myo Nyunt, who is also secretary of the Myanmar Fishery Products Processors & Exporters Association, said the government should provide more support to the fisheries industry because millions of workers rely on the sector for their livelihoods. “Businessmen like us can wait for the market to recover ... but we are especially concerned for our workers and are trying hard to secure orders so we can keep our factories operating, he said. The MFF says the sector, which includes marine and inland fisheries as well as aquaculture, provides jobs for more than 3.3 million people. About two-thirds work in the marine sector, more than 300,000 are employed in processing plants, and many of the rest are informal workers, it says. The impact has been perhaps hardest-felt in Tanintharyi Region, where about 75 percent of its population rely on the fishery sector to make a living, said U Tin Ko Ko Oo, founder of Our Future Initiative, a Myeik-based non-government organisation focused on the sustainable management of marine resources. Despite the commercial fishing ban, Tin Ko Ko Oo said he has not seen a government plan to help workers in fisheries and informal small-scale fishing operations.

In Myeik, less than one-third of marine fishery workers are registered, he said, meaning the government must “think well how to help all-inclusively. “But the problem is that we haven’t seen any efforts [to provide support] yet – even for the formal sector, he added. In Mon State, the fisheries business is down about 80 percent, U Myint Soe, chair of the Mon State Fisheries Federation, told Frontier in an earlier interview. Businesses in Mon normally export most of their catch to China but have been unable to since China introduced restrictions on the border because of COVID-19, he added. Golden Bay’s Myo Nyunt said other exporters were facing similar hardships to his company. Processing and exporting companies are now concerned that if orders rebound in June and July they may go unfulfilled because of the offshore fishing ban. The MFF has requested the ministry shorten the ban by one month, Myo Nyunt said, adding that scientists from the Norwegian research vessel, RV Dr Fridtjof Nansen had also recommended the ban should instead run from February 15 to May 15. “Our situation is like a person who has recovered from illness but has nothing to eat, said Myo Nyunt. No fishing allowed Some argue the ban should be lifted altogether. This includes Our Future Initiative’s Tin Ko Ko Oo, who, when Frontier met him in July last year, said the fisheries department needed to conduct more research on fishery stocks and that a targeted ban on fishing during the breeding season could be more effective than the blanket three month ban. “We need to find out exactly which species breeds in which block at what time; if we know the basic facts, we can ban fishing only in specific blocks, as happens in other countries, he said. But fisheries department officials, especially those in Tanintharyi, oppose the proposal to shorten the ban by a month. The ban was introduced at the suggestion of experts and businesspeople had supported it, said U Thant Zin, head of the fisheries department for Kawthaung District, at Myanmar’s southern tip. “I can’t think of a reason to shorten the ban because of COVID-19, he added.

Two land border crossings in the south, at Htee Khee and Maw Taung, have been closed because of COVID-19 and the only crossing open for exports is at Kawthaung, a short boat ride from the Thai port of Ranong. The fisheries department at Kawthaung said seafood exports via Ranong had earned \$172 million in 2018-19. This fiscal year, from October to May, exports totalled \$219 million, the department said. Fisheries department deputy director-general Myint Zin Htoo said he understood the call for a ban reduction and his department helped submit it to the cabinet. He believes that the Ministry of Agriculture, Livestock and Irrigation has done enough to help the sector, but admits that “they may also want loans with low interest rates because they are businesspeople. The fisheries department has also proposed its own support package that includes loans of K10 million for trawler owners, between K100 million and K200 million for jetty owners, and K300 million for seafood factory owners, he said, adding that the plan is still waiting for cabinet approval. The shrimp perspective As trawler owners and seafood processors chafe over the offshore ban, the aquaculture sector is also facing challenges marketing the shrimp it produces. U Kyaw Tun Myint, who owns a shrimp farm in Ayeyarwady Region, said both the domestic and export markets for shrimp had contracted since March when COVID-19 was first recorded in the country. More than 80pc of inland fishery products that go overseas – mainly to the Middle East – come from aquaculture, said U Hnin Oo from the MFF. Lakes and ponds across Myanmar usually harvest livestock in November and December and sell out by January. Now is the time to start farming again but most aquafeed comes from overseas, said Kyaw Tun Myint, a channel that has been blocked because of halted international transport.

The high cost of shrimp compared to other food products in the domestic market is also dampening demand and pushing some to mull breeding smaller varieties of the crustaceans, added Kyaw Tun Myint, an executive member and former president of the Myanmar Shrimp Association. He said shrimp farmers needed to reduce production costs, including by being able to buy cheaper feed, and ensure that the shrimp they produce is affordable while also maintaining their infrastructure in top condition. “Our farms are facing many challenges right now, he said. But, at least, he added, “the market is reopening slightly again now. Kyaw Tun Myint said the shrimp association had reported its situation to the fisheries department. The government should buy high-quality shrimp breeds to resell at a discounted rate to farmers, offer loans, and use state-owned factories to produce feed domestically, he said. “None of our expectations have come true yet, he added. Businesspeople in the fishery industry say it deserves better government support because of the contribution it makes to national development through export earnings and job creation. More support would also enable the industry to compete more effectively in international markets, they say. Hnin Oo said Vietnam and Thailand earn \$10 billion and \$7 billion, respectively, from seafood exports, “but Myanmar hasn’t even reached \$1 billion. He said the government had neglected the fishery sector for many years, which was one reason why it had been so badly affected by the coronavirus pandemic. “It’s sad that the government hasn’t come up yet with serious ideas about how to help the industry, Hnin Oo said, “at a time when the growth of all businesses in our sector has stalled.

URL: <https://frontiermyanmar.net/en/fisheries-sector-calls-for-government-rescue-amid-covid-19-fallout#.Xub5dmUst1U.twitter>

Myanmar: Mangrove forests are in grave peril

Mangrove forests are under threat across Southeast Asia and in the country of Myanmar alone more than 60% of them were lost within just two decades between 1996 and 2016, according to researchers at the National University of Singapore. “Mangroves are one of the world’s most threatened ecosystems, and Myanmar is regarded as the current mangrove deforestation hotspot globally, the scientists write in a study published in *Environmental Research Letters*. “Net national mangrove cover declined by 52% over 20 years, with annual net loss rates of 3.60%–3.87%. Gross mangrove deforestation was more profound: 63% of the 1996 mangrove extent had been temporarily or permanently converted by 2016. Most of the country’s mangroves have been converted into rice paddies, oil palm and rubber tree plantations, as well as areas used for aquaculture. The profound loss of deforestation in the country’s mangrove forests, which are critical for biodiversity, is the reason why Myanmar has been described as a primary hotspot of mangrove loss in the world. “It is quite incredible to consider that nearly two-thirds of all mangroves in Myanmar were deforested over a 20-year-period, says Edward Webb, one of the authors of the study. Mangrove trees grow in various depths of water in coastal areas and they are crucial for coastal marine ecosystems. Their dense entangled roots stabilize coastlines and provide homes to a variety of marine species, including fish and crustaceans. Mangroves can also absorb large amounts of carbon dioxide, as a result of which these forests play an important role in the fight against climate change. Mangroves growing in South Asia, in Southeast Asia and elsewhere in the Asia-Pacific region account for nearly half, or 46%, of the world’s entire mangrove forests. Southeast Asia is home to the world’s highest rate of mangrove biodiversity. Many of the region’s mangroves, however, have been lost owing to agricultural activities.

Loss of mangroves equates to loss of habitat available for mangrove-dependent wildlife, and this may include birds, mammals, fish and crustaceans, as well as crocodiles, Webb says. “Perhaps, as important are the implications for other ecosystem services associated with mangroves, including shoreline protection and carbon sequestration. The rapid deforestation of mangroves in Myanmar has also been detailed in another study, led by Daniel Richards and Daniel Friess, two researchers at the National University of Singapore who investigated the rate of mangrove deforestation in Southeast Asia, including Myanmar, between 2000 and 2012. The scientists reported that rice farming was a main driver of mangrove loss. The government of Myanmar has sought to increase food security, which has resulted in boosts to rice farming production. Yet that has come at a cost to mangroves that have been converted into paddies. “Almost 25,000 hectares of Myanmar’s mangroves were converted to rice paddy between 2000 and 2012, Richards noted. A similar situation has prevailed elsewhere in Southeast Asia. “Sixteen percent of all deforested mangroves in Southeast Asia were replaced with oil palm plantations during our study period, the scientist said. “We usually think of oil palm as an issue which affects tropical forests on land but our study shows that demand for oil palm is also driving deforestation in coastal mangrove forests. The rate of deforestation is of especial concern in Myanmar because the country’s government does not consider mangroves to be important parts of the ecosystem that need to be preserved. “As a result of the lack of environmental safeguards and continuing economic transformation in Myanmar, we may expect mangrove conversion to rice and other agriculture to continue to displace large areas of mangrove in this country in the future, the authors warn in their study. The loss of nearly two-thirds of Myanmar’s mangroves in just a few short years has raised the specter of an environmental calamity in the making. Yet the remaining forests can still be saved. “The fate of mangroves in the country will be tied to the strength of policies and

implementation of conservation measures, Webb says. “Through proper long-term planning, management and conservation, this resilient ecosystem can recover and be maintained for the future.

URL: <https://www.sustainability-times.com/environmental-protection/myanmars-mangrove-forests-are-in-grave-peril/>

Myanmar: Southern Myanmar’s indigenous groups say the UN should scrap \$21 million conservation plan

Myanmar’s Tanintharyi Region is among the most vibrantly biodiverse places in Asia. The southern tail of kite-shaped Myanmar, Tanintharyi encompasses hundreds of islands in the Myeik Archipelago, mangrove-lined coast, evergreen forests and the mountainous spine that forms the Thai-Myanmar border. The region holds some of Southeast Asia’s largest intact forests, which feed and house complex ecosystems of tigers, Asian elephants, gibbons, clouded leopards, tapirs, pangolins and people. Nearly 1.5 million people living across Tanintharyi’s forests and coastline rely on the region’s ecosystems to fish, hunt and harvest vegetables and herbs. But an alliance of local community groups in Tanintharyi is calling for the government and environmental organisations to drop plans for a US\$21 million conservation project in the region. The UN-backed Ridge to Reef Project aims to turn 3.4 million acres of land over a third of Tanintharyi into conservation areas, but the Conservation Alliance Tanawthari (CAT) says the project will jeopardize local communities’ access to food and livelihoods. According to CAT, the conservation project will dispossess tens of thousands of indigenous people of their land, primarily ethnic Karen communities. Instead, the communities and groups behind CAT are calling for donors, environmental groups and the government to change course and embrace an inclusive, indigenous-led approach to conservation. Local groups also point to how top-down conservation efforts have so far failed, allowing logging, mining and destructive development projects. A new report by CAT outlines indigenous opposition to the UN project and lays out exactly how each party involved can let local residents take the lead including how Myanmar needs to amend domestic laws to recognize local land management systems. Local groups say indigenous experts know best how to conserve the land. Local residents have been conserving the landscape for hundreds of years through their relationship to the ecosystems that they are a part of, and through indigenous practices like communal land management and sustainable farming. Residents across the region already base their lives on what the UN and environmental groups would call “conservation strategies” regulating hunting, establishing fish conservation areas, managing forest fires and cultivating herb forests. Villagers use rotational farming to grow rice, chillies, vegetables and other crops, and keep orchards of betel nut, mangosteen, guava, durian, coconuts, cashews, cardamom and limes. In coastal areas, residents forage for shellfish and snails. In the Myeik Archipelago, locals catch oysters, lobster, sea cucumber, crabs and other sea life, eating a diverse and sustainable diet.

The recent report from CAT shows how some of these villages are now mapping their land, documenting each of these practices as well as the systems the communities use to approve or reject changes to how their land is used. Some of these systems are formally recognized by the Karen National Union (KNU), the ethnic armed group that controls sections of the region and

has its own land and forestry policies. The KNU has established one natural medicinal conservation zone, the Tameh Herbal Medicine Forest, at the northern end of the proposed Ridge to Reef area. In this area, Karen organisations are working to catalogue wild edible and medicinal plants. So far, they have logged 245 varieties of medicinal plants and 188 wild edible species. More recently, indigenous Karen have created the Salween Peace Park, a combined conservation and peacebuilding effort that coordinates land management across an area twice the size of the US's Yosemite National Park. "Indigenous peoples conserve their territories through a landscape approach by seeing the interconnections through the landscape we have seen this through the example of the Salween Peace Park, said Saw Paul Sein Twa, director of the Karen Environmental and Social Action Network (KESAN), a member of CAT. "Now it is time for governments, international organisations, businesses and the UN to learn from indigenous people.

CAT says the most effective way to preserve Tanintharyi is to support existing local strategies and listen to local experts because they know best how to conserve the landscape, having done so for generations. "Our communities have been conserving this area for generations; it's time for their efforts and initiatives to be recognised and supported, said Saw San Ngwe, community leader and director of Southern Youth Development Organization. Local groups force UN to suspend plans The UN Development Programme (UNDP) put the Ridge to Reef project on pause in 2018 after CAT and local residents filed an official complaint with the UN saying they had never consented to the project. Residents said the partners behind the project the Global Environment Facility, Fauna & Flora International and the Myanmar government never asked local residents how to conserve the land. The proposed conservation areas would impact 225 villages, but CAT says the organizations only consulted with 14 villages. They also said the conservation plan seeks to dictate how local residents can and cannot interact with their environment, threatening their access to food, livelihoods and places that are culturally vital. The complaint said that the conservation plan would also prevent refugees and displaced communities from returning home to the region.

The UNDP launched an investigation in response to the communities' complaint and it is still ongoing. Existing conservation efforts have failed, exposing the region's ecosystems to damage. The government first proposed national parks for Tanintharyi in 2002 under the military junta. But the region has still seen a rapid increase in mines and land concessions that allow private and government-backed companies to pull the landscape apart. The government has ceded parts of existing conservation areas, like Lenya national park, to commercial interests. The region was also an active conflict zone until 2012, when the Karen National Union (KNU) and the Myanmar military signed a bilateral ceasefire. Since then, agribusinesses and development corporations have become increasingly interested in the region. "Our lands are threatened both by expanding agribusiness and mining projects on one side, and national parks and conservation on the other, said Saw San Ngwe. Tanintharyi's landscape is now pockmarked with 1.8 million acres of palm oil concessions and dozens of mines. Mangrove forests are quickly being cut to supply charcoal for Thailand.

The forests and coasts also face threats from planned industrial zones and 18 proposed dams, according to a tally by local advocacy groups, as well as extensive highway projects. The stakes of conservation in Tanintharyi go beyond local access to land and food the region is a vital carbon

sink and home to over 150 threatened species. The indigenous Karen groups say the existing, traditional way of managing land and resources will prevent private interests from carving up the region. The indigenous communities are calling this vision for conservation “Tanawthari Landscape of Life (Tanawthari is the Karen name for the region). “The Tanawthari Landscape of Life is a vision of community-driven conservation, of harmonious relationships between humans and nature, and of lasting peace, said Naw Ehhtee Wah, CAT coordinator. “We hope that international organisations, donors, and the Myanmar government will hear our calls and support this vision, rather than making plans without us.

URL: <https://www.aseantoday.com/2020/06/southern-myanmars-indigenous-groups-say-the-un-should-scrap-21-million-conservation-plan/>

Myanmar: Meet the Innovator Protecting Our Oceans in Myanmar: Thanda Ko Gyi

My love for the underwater world is what originally got me involved in this type of work. But through Myanmar Ocean Project, I have found a new source of inspiration: people. Fishing communities across the Myeik Archipelago have welcomed my team and me with open arms and supported our work every step of the way. Seeing how dependent these communities are on a healthy ocean and its plentiful resources to provide food and income has really added another dimension to my work. I want to see these communities thrive. I want them to be able to continue their traditional way of life. And I want them to have the opportunity to show their grandchildren the beauty of the colorful house reefs. This is what drives me most. What do you see as the biggest challenges facing our oceans in 2020? In addition to discarded fishing gear wreaking havoc, climate change poses a major threat to the health and biodiversity of our oceans. I’ve seen with my own eyes how bustling coral gardens turn into underwater graveyards due to coral bleaching.

Climate change is a multi-faceted threat that puts millions of lives and livelihoods in Myanmar at risk. Despite degrading ocean ecosystems, climate change also contributes to rising sea levels and increasingly erratic weather patterns that threaten island communities in particular. In Myanmar, millions of people in the coastal communities depend on marine resources to make a living and feed their families. If coral reefs degrade due to rising water temperatures, there will be no marine life left to sustain these families. We need to do everything in our power to tackle climate change and protect those most vulnerable. In the end, these communities have contributed little to the problem but are bearing the brunt. What message would you like everyone to hear on World Oceans Day 2020? Our ocean is life. We need healthy oceans to survive. So, let’s get to work and make sure we treat our ocean like the precious resource that it is. Whether that means demanding climate action from your government representatives, raising awareness about unsustainable fishing practices, or supporting organizations helping to protect marine life, everyone can do their part no matter where they live and who they are. The world has to come together, put aside any differences, and work as a global community to solve the urgent issues of our time. Everyone on this planet has the right to lead a happy, content life no matter where they are from and which family they were born into. Let’s make this a reality!

URL: <https://www.marketscreener.com/news/Meet-the-Innovator-Protecting-Our-Oceans-in-Myanmar-Thanda-Ko-Gyi--30703538/>

Myanmar: Collapse in Myanmar Seafood Exports Puts 1 Million Jobs At Risk

Follow Bloomberg on LINE messenger for all the business news and analysis you need. About 1 million people may lose their jobs in Myanmar's fisheries industry, with almost all exports ceasing since February as the spread of Covid-19 prompted major buyers, led by China and the U.S., to halt orders. Processing plants wouldn't have been able to deliver anyway, as factory closures were part of the government's measures to stall the pandemic. Before the outbreak, the Myanmar Fisheries Federation forecast record exports of \$1 billion this year, up about 40% from 2019. That's been slashed to \$350 million. The fisheries sector employs about 3.5 million people in Myanmar, roughly 6% of the Southeast Asian nation's workforce. In some coastal regions, one in three workers earns a living from seafood and marine products, according to a World Bank report in June 2019. "It is a time of zero exports without any new orders from buyer countries, Hnin Oo, senior vice president of the Myanmar Fisheries Federation, said in a telephone interview Friday. Myanmar fishery exports largely depend on China, the U.S., Japan and European countries, he said. Hnin Oo said aquaculture businesses and the animal-feed industry are among the most-vulnerable in the Covid-19 crisis.

Without exports, the tap on cash flow has been turned off. Many companies, most of them small, face high "interest burdens because they lack collateral required by commercial banks, so they turn to black-market lenders for funding. Some businesses have already folded. "It's almost impossible to sell locally because normal people can't afford the marine products that are processed and tailored for exports, he said. A sizable portion of products, including shrimp, prawn, crab and both fresh and ocean fish, involve cold-storage. Even domestic sellers are at risk. Lockdowns, social-distancing rules and the closures of restaurants and markets — as well as tumbling incomes — have crimped consumption. Sales at the Sanpya Fish Market, the nation's biggest wholesale outlet for marine and seafood products, have plunged by almost half since the coronavirus outbreak. Hnin Oo urged the government to ease land-use policies, increase stimulus spending and provide long-term discounted loans to aquaculture businesses. In some coastal regions, as much as 56% of revenue for regional governments comes from the fisheries sector, according to the World Bank. "We expect the authorities to invest wisely in this sector, otherwise it will not survive, he said.

URL: <https://uk.finance.yahoo.com/news/collapse-myanmar-seafood-exports-puts-220000165.html?>

Myanmar: 300,000 Myanmar migrant workers in Thailand jobless due to COVID-19 pandemic

More than 300,000 Myanmar migrant workers in Thailand are facing unemployment due to COVID-19 pandemic, said Htoo Chit, Executive Director of the Foundation for Education and Development based in Thailand during a webinar held at Yangon Journalism School about the

challenges faced by migrant workers in Thailand in the time of COVID-19 pandemic outbreak. He said he knew from the survey collected by Migrants Working Group in Thailand. The survey said more than 500,000 migrant workers from Myanmar, Laos, and Cambodia in Thailand are unemployed due to the COVID-19 pandemic. “The number of Myanmar migrant workers in Thailand is about two-third of the total number of migrant workers in the country so we can say at least 300,000 Myanmar migrant workers are jobless generally, he said. The migrant workers are mainly working in factories, fishing, and tourism industries. Some of them are lay-off and some of them have been reduced their working hours to reduce their salaries. Some are waiting for their work to be reopened. “Migrant workers working unofficially are included in lay-off mostly and it will make them hurt more, he said. Myanmar migrant workers are exploited by unscrupulous employers, and faced unfair treatment by authorities and violations of human rights and didn’t receive compensation. More than 30,000 Myanmar migrant workers are listed to return home, he added. The number of Myanmar migrant workers returned to Myanmar from Thailand is roughly between 70,000 and 100,000 during March, he said.

URL: <https://business.inquirer.net/298514/300000-myanmar-migrant-workers-in-thailand-jobless-due-to-covid-19-pandemic>

Myanmar: How sand mining puts Southeast Asia’s farmers at risk

This land was mine, it eroded slowly from the riverbank and after a while, the whole chunk of land totally collapsed, Than Zaw Oo, a farmer on the Salween River in southeastern Myanmar’s Mon State, told Reuters recently. He said he’s lost three-quarters of his land to erosion and is now a few thousand dollars in debt from paying for embankments to try to preserve his farm. As COVID-19 shakes economies and lockdowns leave many without income, the pandemic raises questions about the security of our food supply. Agriculture in Southeast Asia is so far stable, though the region’s farmers were already struggling with significant challenges from drought and climate change before the pandemic hit. But farmers are now also seeing impacts from sand mining, a sprawling industry fueled by demand for concrete and glass for cities and infrastructure projects. Along rivers and off coasts throughout Southeast Asia, miners use dredging machines to extract the sand, piling it on barges to be sent to megacities like Bangkok and Jakarta or further afield. The world’s largest sand importer is Singapore, which uses it for land reclamation projects. The biggest sources for sand mining in the region are Cambodia, Indonesia, Malaysia, Myanmar and Vietnam. According to a UN Environment Programme (UNEP) report, the global demand for sand has tripled over the past 20 years to around 50 billion tonnes per year, more than any other natural resource. The same report shows that sand extraction drives pollution, flooding, lowering of aquifers and drought. The impacts of sand mining make Southeast Asia’s food system less resilient and make farmers in the region more vulnerable to the impacts of both climate change and shocks like the COVID-19 pandemic. As sand is scraped from riverbeds, it changes the hydrology of the river and damages its ecosystems. It destroys fish habitats and removes nutrients needed for animals as well as agriculture. Riverbed mining also drives erosion, both along the rivers where dredging occurs and also along coastlines, where sediment from the rivers normally replenishes the land. In river deltas, the impacts of dredging expose farms to the threat of saltwater intrusion. Southeast Asia’s farmers are losing land to erosion Erosion from sand mining is wearing away at the land of farmers like

Than Zaw Oo and it may be jeopardizing Myanmar's food supply. Residents along the Salween and in the Irrawaddy River region, where Myanmar grows the majority of its food, have told reporters and researchers that erosion has quickened rapidly since sand mining took off.

Marc Goichot, an Asia Pacific water expert at WWF, told Frontier Myanmar that researchers from his team found the Irrawaddy Delta has already been worn away by the removal of sediment from the river system. In 2008, the delta was wracked by Cyclone Nargis, which left at least 138,000 dead. Goichot said that if the delta, a major food producing region, were hit by a similar storm today, the impact would be much greater. As climate change drives more frequent and more intense storms across the region, the risk for depleted deltas like the Irrawaddy increases. The current sand mining boom in Myanmar has taken off in part because the Philippines, Malaysia, Cambodia and Vietnam have restricted or banned exports of sand to Singapore, driving up demand in Myanmar. Sand mining allows salt water to swamp river delta agriculture. The impacts of sand mining also make the region's vital and vulnerable river deltas vulnerable to saltwater intrusion from rising seas, especially the Mekong Delta in Vietnam. The Mekong Delta is one of Southeast Asia's most productive agricultural regions and is vital to the regional and global food system. Home to 20 million people, it produces nearly one-fifth of the world's rice. But as sand mining deepens riverbeds in the delta, it allows saltwater to intrude further and further into the river system during the annual dry season. Deeper riverbeds and lower flows also mean that the saltwater stays in the delta longer, killing crops. Between smaller harvests and less income for farmers, the intrusion of saltwater poses a major threat to agriculture in the delta: this year, it damaged crops as far as 110 kilometers inland. The problem is exacerbated by drought and record-low water levels in the Mekong and in Cambodia's Tonle Sap Lake, normally the source of about one-third of the delta's water supply.

Without that added flow in the river, the saltwater is expected to push up 30-40% further into the delta during this year's dry season. The delta is also more vulnerable to hydrological changes than previously thought, as a 2019 study at Utrecht University in the Netherlands showed that the elevation of the delta is on average only 0.8 meters above sea level, two meters lower than earlier measurements suggested. According to WWF and the Mekong River Commission, mining extracts over 55 million tonnes of sand from the Mekong every year almost double the amount naturally carried by the river. But the amount of natural sediment is also dropping quickly with the construction of hydropower dams: a study by UNEP and the Stockholm Environment Institute in 2017 showed that if Mekong governments continue with the 11 dams planned for the mainstream of the Mekong, it could block 94% of the river's sediment from reaching the delta. The riverbed in many parts of the lower Mekong is dropping by 20-30 centimeters per year. Between sand mining and the impacts of dams, the Mekong Delta could lose much of the sediment that prevents it from being scoured by salt water. High demand drives illegal mining, even during COVID-19. Indonesia, Cambodia, Malaysia and Vietnam have all adopted bans or regulations on sand mining, some specifically targeting trade with Singapore. But much of the industry is illegal: between 2007 and 2016, only 3.5% of sand exported from Cambodia to Singapore was recorded by the Cambodian government. In Vietnam, the rate of illegal sand mining increased significantly during the country's COVID-19 lockdown, according to local residents. Residents of Hanoi's Ba Vi District reported a large increase in the number of sand mining barges in their area of the Red River.

Locals in the southern province of Binh Phuoc reported similar increases, with trucks entering and leaving their community every day. Vietnamese authorities have tried to crack down on illegal mining and have caught a number of violators but the problem persists as before. The government's next plan is to raise fines on illegal mining and possibly amend laws to reclassify the crime as theft. But in an otherwise precarious economy, sand mining offers quick payouts. A load of sand can bring in US\$700-1000, compared to the average Vietnamese income of \$269 per month. The price of sand is also rising fast in Vietnam, the price of sand quadrupled in 2017. With the economic impacts of the pandemic, governments that crack down will have to support sand miners to find alternative livelihoods. From erosion to saltwater intrusion, riverbed dredging introduces new risks that make farmers in the region more vulnerable at a time when many people are worried about the stability of our food supply. Sand mining is putting Southeast Asia's agriculture in jeopardy, and without careful regulations, strong enforcement and steps to reduce demand, farmers in many areas will struggle to feed the region.

URL: <https://www.aseantoday.com/2020/05/how-sand-mining-puts-southeast-asias-farmers-at-risk/>

Myanmar: Super cyclone Amphan may hit Myanmar's northern Rakhine State

When the Super Cyclonic Storm (AMPHAN) raging over the Bay of Bengal passes through India and the border of Bangladesh, it may hit parts of northern Rakhine State, according to an alert by the Meteorologists. "Rain will fall in Rakhine and Chin States, upper Sagaing Region, Mandalay, Yangon, Ayeyawady and Mon State on May 19th and 20th. Now, the storm is moving to the northern part. Later, it will be passing through the India and border of Bangladesh. So, the storm may affect the northern Rakhine State. The fishing boats offshore of Rakhine State must be careful about the storm. After the storm, it will be hot. Central Myanmar will suffer from the heat. Rain will continuously fall in Mon, Kayin and Taninthari Region. Meanwhile, the southwest monsoon can enter the southern parts, said Meteorologist Chit Kyaw. "We suggested that the super Cyclonic Storm will move to North- northeast parts. Later, it will pass on the India and Bangladesh's border on May 20th. The circle of the storm is a little big. Occasional squalls with rough to very rough seas will be experienced off and along Deltaic, Rakhine coasts. Surface wind speed in squalls may reach (40-45)m.p.h, said Dr Kyaw Moe Oo, Director General of the Department of Meteorology and Hydrology (DMH). According to the observations at (05:30)hrs M.S.T today, the Super Cyclonic Storm (AMPHAN) over the West Central Bay of Bengal has moved to the North-Northeast-ward. It is centered at about (325)Nautical miles South of Paradip(Odisha-India), about (405) Nautical miles South-Southwest of Digha(india), about (475) Nautical miles South-Southwest of Khepupara (Bangladesh), about (400)Nautical miles West-Northwest of Coco-Island and about (490) Nautical miles West-Southwest of Patheingyi (Myanmar). Weather is partly cloudy over the East Central Bay and cloudy over the Andaman Sea and elsewhere over the Bay of Bengal. As the the cyclone is not heading towards Myanmar yet, only a yellow-level warning has been issued. The DMH also announced that rain or thundershowers will be fairly widespread in Bago, Yangon, Ayeyarwady and Tanintharyi Regions, Rakhine and Mon States, scattered in Naypyitaw, Mandalay and Magway Regions, Southern Shan, Chin, Kayah and Kayin States and isolated in the remaining Regions and States. Degree of certainty is (80%). Occasional squalls with rough seas will be experienced off and

along Deltaic, Rakhine Coasts. Surface wind speed in squalls may reach (40)m.p.h. Wave height will be about (8-12) feet off and along Deltaic, Rakhine Coasts.

URL: <https://www.thestar.com.my/news/regional/2020/05/19/super-cyclone-amphan-may-hit-myanmar039s-northern-rakhine-state>

Myanmar: Fisheries sector nears collapse as orders tumble

Myanmar's fisheries sector will face its largest loss in history if demand does not pick up very soon, said U Myo Nyunt, secretary of the Myanmar Fisheries Products Processors & Exporters Association (MPEA). "Exports have collapsed. All international orders have been cancelled and we have not received any new orders from the European Union (EU) since they are all locked down, he told The Myanmar Times. The EU and other western countries accounts for about 45 percent of Myanmar's fisheries exports, while China and Thailand account for the remaining 55pc. The drop in demand will affect businesses throughout the fisheries supply chain. "At first, those operating cold storage facilities did not have any income and some had to shut down. Now, factories are not allowed to open and jobs are dwindling, said U Myo Nyunt. Fishermen further up the value chain are suffering too. Without demand, more fishing vessels have been seen anchoring at Yangon's ports and some fishermen have been forced to auction off their boats. "Normally, fishermen sell hundreds of tonnes of fish and prawns a day. But when the factories don't operate, there are no buyers, U Myo Nyunt said. With losses mounting in April and May, the MPEA expects upstream fishing and aquaculture activities to grind to a halt from June to August. Consequently, even if factories are allowed to reopen, there will be a shortage of fisheries supplies for processing. Importantly, the delays could disrupt the entire fishing season as fish farmers, who abide by fixed schedules such as for the farming of fish roe and fish breeding will not be able to carry out their activities according to plan. As such, the MPEA is projecting the largest loss in history for the sector for the six months between March and August. The industry is now calling on the government for more aid. U Myo Nyunt said: "Tourism operators and garment manufacturers are receiving government loans and aid from the EU as a result of COVID-19. But aquaculture and fisheries are not in the government's list of sectors most impacted by the virus and we have not received EU subsidies even though we contribute significantly to exports. The Ministry of Agriculture, Livestock and Irrigation has been notified of the disruptions to the fisheries industry. "We have been instructed to look into the changes in the fishing season this year and will give an answer after the experts have submitted their reviews and completed inspections, said U Hla Htun, permanent secretary of the ministry. Fisheries exports generate an average of US\$700 million in revenue, according to the Ministry of Commerce. This includes border and maritime trade. Before COVID-19, the sector had been forecast to generate \$750 million in export revenue in fiscal 2019-20.

URL: <https://www.mmmtimes.com/news/myanmar-fisheries-sector-nears-collapse-orders-tumble.html>

Myanmar: Financing Myanmar's fisheries through fiscal reform

The hilsa shad is one of Myanmar's most commercially valuable fish species. It also provides income for thousands of artisanal fishing households in some of Myanmar's most impoverished areas. Yet hilsa stocks appear to be in decline. Existing fiscal tools such as taxation and licence fees, already used by the government to generate revenue from hilsa production and trade could be used to mobilise additional resources from the value chain. Doing so could provide financing for a system of incentive-based hilsa fisheries management. By increasing revenue collection efficiency and adapting current tools to better target actors nearer the top of the hilsa value chain, the government of Myanmar could triple current revenues and use these to support more sustainable and inclusive hilsa fisheries. Full document is available at:
<https://pubs.iied.org/pdfs/17751IIED.pdf>

URL: <https://pubs.iied.org/17751IIED/>

Myanmar: Plan underway for fish trucks to enter market via land route

With the delayed trade flow into the Central Sanpya fish market, the plan is underway for the fish trucks to enter the fish market via land route systematically, said Yangon Region Hluttaw Representative U Khin Win. Previously, only those fish entering via sea routes were allowed to sell in the Central Sanpya fish market to prevent people from being crowded so that coronavirus spreading can be prevented and controlled. A coordination meeting was held at the National League for Democracy office in Kyimyintdine Township on 2 May with the regional Hluttaw representatives and the Central Sanpya fish market committee members in attendance. "To prevent people from being crowded in coronavirus spread, half of the supply of the fish to the Central Sanpya fish market was sent to Shwe Padauk fish market as this half entered via land routes. This being so, Sanpya Fish Market is being faced with the shortage of fish supply. Thus, a total of 146 fish traders from Central Sanpya fish market are being faced with difficulties. The rising of the fish prices affected the flow of trade. So, a proposal is to be submitted to the municipal in order to allow the fish trucks to enter via land routes systematically, he said. Around 400,000 or 500,000 visses of fish are entering the market daily. Among them, 80 per cent of the fish are entering by the frozen container trucks via land route while the remaining 20 per cent are entering by vessels via sea routes. During the coronavirus prevention and control period, the Yangon City Development Committee (YCDC) has restricted the purchasing vehicles and the container vehicles from entering the market before 5 am on 24 April to reduce the crowding and to control shortage of the cargos.

URL: <https://www.globalnewlightofmyanmar.com/plan-underway-for-fish-trucks-to-enter-market-via-land-route/>

Myanmar: Fish market demand decline during COVID-19 period

The drop in demand of the local fish market has worsened during COVID-19 period according to the general secretary Win Kyaing of Myanmar Fisheries Federation on April 27. In the fishing sector, there are onshore and offshore fishing. When we sell fish these days, prices are falling and there is less local market demand, he said. During COVID-19 period, there were less export

businesses due to closure of cold storage factories and permission needed to open factories. Besides, restaurants are closed, there are no more alms giving or charity works or donations, and as result, there is only demand from houses. As the transportation is stopped, there are weaknesses in transportation and when sold in Yangon, demand is less than before the COVID-19 period. Myanmar bans marine fishing from June to August and bans fishing from ponds between May and July to facilitate the breeding season. Similarly, fish breed in men made ponds are usually sold about six and a half viss but now only one and a half are sold. He continued in saying that it is difficult to expect how long the situation will last. Fish breeders and sellers faced challenges, transportations was stopped and market demand was less. If the COPVID-19 period will be long, the fish industry will seem to be declining in the coming year, he added. Therefore, he suggested that the government needs to strengthen the fishing industry.

URL: <https://elevenmyanmar.com/news/fish-market-demand-decline-during-covid-19-period>

Myanmar: As raft-fishing businesses in the Ayeyarwady region also known as the West Coast experience deforestation and scarcity of fish resources

As raft-fishing businesses in the Irrawaddy[Ayeyarwady] region also known as the West Coast experience deforestation and scarcity of fish resources, many big boat operations are setting their sights on the Myanmar East Coast. The journey takes two days and there has been a notable increase in boat traffic, much of it in secret. Raft-fishing operators from Irrawaddy [Ayeyarwady] have been gradually migrating into Mon fishing blocks and are contributed to human rights abuses, through forced labor and human trafficking. In addition, many of these are illegal business operations creating a loss of State revenue and threatening fish populations. The number of raft fishing operators is enormous. Mon States' Minister for Agriculture, Livestock, Transportation, and Communications, U Tun Htay described the situation this way, "if we [connected] all the fishing rafts from Ayeyarwady region and Mon State [together] it would be possible to walk [on them] from Pyapon [Township], in Ayeyarwady to Mawlamyine [Mon State]. The Hluttaw approved the need to take action. Dr. Aung Naing Oo, Chaungzong Township Constituency (1) proposed in the 15th regular session of the Mon Hluttaw in February 2020, that systematic measures are needed for the marine fisheries sector, in order to prevent human trafficking and human rights abuse of workers. Between January 21 and 24, 2020, an inspection group that included the Department of Fisheries, the Fisheries Federation, the Department of General Administrative, police force members, and the media investigated the situation at sea. Nyan Soe Win, a reporter from a news outlet, the Irrawaddy, who joined the group noted that in fishing blocks D6, D11, and D12, there were 1223 fishing rafts. Of these, 57 fishing boats could not produce their business licenses issued by the Department of Fisheries. More than 4000 fishermen working in these blocks were unable to show their fishermen cards. He pointed out that, "More than 1000 fishing rafts [have intruded into the Mon coast] from the Ayeyarwady as we found out during our visit for two days. If we were to stay longer, we would see many more. The fishermen said they came because there are ten thousand fishing rafts on the Ayeyarwady River, and it has been congested on the sea. According to the Department of Fisheries, there are 153 offshore licensed local fishing rafts and 1000 inshore fishing rafts in Mon State. According to the local people, the numbers are much greater. Area residents suggest that about 2000 raft-fishing businesses operate offshore. They are thought to be from Abaw-Kyar-Than, Si Phyu

Daung Kyar Than, Asin-Taemin-Sate, and an Andin fishing camp located in Ye Township. Only a small number of raft-fishing operators have been investigated by the Department of Fisheries. A member of the Ye Town Social Services unit (YSS), U Aung Naing Win, pointed out that raft-fishing owners have become more cautious with their operations. This is in part due to media reports of human rights abuses, particularly one case involving the trafficking of a university student from the Irrawaddy region last year. Also, the number of crimes in the raft-fishing business in Ye Township has been declining. He added, “there were about four to five criminal cases each month in our township, but it has been declining this year. It could be due to the [media reporting] of the [human trafficking] case that happened in the Irrawaddy region. The fishing rafts helmsman have also become more cautious. Now they treat their workers better, and their employment relationship has improved. The owners of raft-fishing businesses seem to control their people [helmsman] better.

However, on February 22, a criminal case took place involving a fishing raft, west of the Wa-Kyon, in Ye Town [river mouth], which was stationed 30 miles from the shore. Ye Township police station charged the helmsman and one fisherman, under Section 302/144 of the Myanmar Penal Code, for killing another fisherman with a sword. The altercation became violent after it was alleged the fisherman had not performed his duties well. According to U Myo Win, a Ye resident and Amyotha Hluttaw representative, “some fishing raft workers did not want to stay at sea. Things became violent, when the helmsman tried to stop [these] workers [for wanting to return to land]. Three to four criminal cases used to take place [involving] the fishing raft [operations] each month, and workers were killed from fights. Working conditions U Myo Win, explained that inshore fisheries work involves eight hour days, with the potential of overtime pay. However, those stationed on a raft cannot earn overtime pay and have less hours for sleeping. The rafts, which range from 20-30 feet long, house one helmsman and two workers. This small group of workers can be together at sea, 24 hours a day for eight months. Under such conditions, of hard work, little rest and limited space, there is often high potential for fighting and mental breakdowns. The growth of the industry has demanded more workers, and there is increasing competition amongst labor brokers to recruit new workers. Workers come from various backgrounds, some are inexperienced, unskilled, unhealthy, or are evading the law [wanted persons], or are deserters from the military or police. Others are homeless persons who are forced into labour at the hands of some criminal labour brokers. Each fishing raft requires two to four workers, depending on the owner’s business operation. Experienced workers can earn a living from the job without having any difficulties, but inexperienced workers face many obstacles including physical abuse and violence.. One worker, Ko Min Oo describes the daily operation, “A fishing net is thrown underwater every six hours. Once when the sea level rises and another time when the sea level goes down. This happens four times a day. We have to haul the net up four times and cast the net four times, following the sea current. The mouth of the net has to be opened wide and faces the direction of the water current. From there, fish and prawns enter the cone-shaped net, and they reach the narrow end of the net, where fishing bait is stored. All trapped aquatic animals gather with the bait. We haul in the fishing net and then harvest the fish. A group of 40 fishing rafts, where Ko Min Oo worked, has 40 helmsmen, who in turn are managed by one person who is in-charge of overall operations. This person sets the rules and gives penalties if there is no catch, or if someone has a serious illness, or is lazy at work, and other issues. Ko Min Oo, described a harrowing incident in which a fisherman became a victim.

“One worker jumped into the water and went into the casting net, which later was hauled aboard the raft.

The water was so strong that he could not [swim out of the net) and died, so I quit the job. Sometimes, the fishing equipment, like the wheels that haul the large nets aboard the raft, puts workers into great danger, such as breaking arms, legs or resulting in loss of life. In addition surviving in storms and high waves are not easy, particularly for those inexperienced with life at sea. Workplace injuries or death is common in this very hazardous workplace. Misfortune also includes rafts being torn apart by storms, and workers being stranded at sea. There are no records of the number of raft fishing workers who have lost their lives due to such natural disasters. Likewise there are few, if any life vests or safety gear on board these rafts. Raft fishing economics Six hours after a fishing net is hauled aboard the raft, the prawns are selected and boiled, while large fish are sun-dried. The fishermen note the total weight of fish and prawns harvested. Apart from their annual wage, they will earn additional pay when they return to the shore during the fishing off-season in accordance with the weight and sale price of the harvest, explained Ko Thin Aung, a fishing raft owner. Ko Thin Aung said, “Depending on the sort of fish we get, [the prices range] from 200 Kyat per Viss (1.6 kilograms), and a better fish species could get 500 Kyats per Viss. Workers have to list [the harvest] based on the weight of captured fish. All workers have to make a list. When they get back to the shore, they can get paid for that. Last year, each [fisherman] earned about 700,000-800,000 Kyats from extra payment. This year, business is not too bad, Typically, eight months of salary for a helmsman ranges between 1,000,000 to 1,200,000 Kyats, and fishermen generally receive from 500,000 to 600,000 Kyats. According to industry regulations, employment contracts between the business owner and workers are to include the workers’ names, father’s name, and address. However, the investigation team found that almost every contract they saw did not include any identification information related to the workers. Other irregularities were found with these contracts. They were not official Myanmar government stamped contracts, which are to be A4 typed papers issued by the Ah-Sin village Fishery Business Operators Association and must be signed with a witness. The contract included four main points: 1. If the worker fails to start their working [day], he will have to pay back twice as much as the advanced payment. 2. The worker will only receive half of his annual payment, if he leaves his job before the end of the year without the employer’s permission. The employer has to make a payment equivalent to the workload of workers. 3. The employer must pay compensation, if any accident occurs in the workplace. 4. The employer must handle situations where workers are injured or do not feel well. Some workers reported to the investigation team, these terms were often not upheld. The Ye Township Fishery Industry Department has been negotiating between industry owners for new ways and means to eliminate human trafficking, promote a fair payment system and issue proper registration cards for more than 4500 workers from inshore and offshore boats/fishing rafts, and fishermen.

In addition, Amyotha Hluttaw representative, U Myo Win added, that parliamentary representatives have held educational talks on the issues. U Myo Win explained, “If business owners only accept workers with registration cards, it will be easier for them to investigate and identify if a crime or complaint occurred at sea. Not only helmsmen but also the raft-fishing business owners could be affected if workers experience inhumane or forced labor. After visiting and discussing this with both sides, we have not heard of any related crimes in two to three

months. U Myo Win further commented that stronger regulations are still needed for fishing raft workers. These rules and regulations must address in detail issues such as; working hours and salary, number of workers/raft, illness, work-related injuries, death, natural disaster protection. In addition, U Myo Win argues that the industry must face operational inspections at sea involving the coast guard/ police forces. He estimates it could take at least two years to complete such regulatory, monitoring and enforcement protocols. International implications Some of Myanmar's fishery products are imported to the European Union and other western countries creating revenue for both the state and business owners. In light of this international trade in fisheries, it is becoming more important for the industry and government to take careful steps to address human rights concerns, and the documented increase of forced labor and human trafficking cases. Deputy Minister for Agricultural, Livestock, and Irrigation, U Hla Kyaw, told reporters on February 28, that fishery business owners and workers from raft-fishing industry operators based in England are required to register at the Department of Fisheries.

The Deputy minister U Hla Kyaw said, "Workers there must be registered. For example, Mr. A.. is a fishery industry owner employing 33 fishermen. He must register those workers' personal information including their identity and whereabouts at the Department of Fisheries. The owner must also get a license for his business. All of these [requirements] already exist. In some cases, however it did not seem to be effective particularly at times when there is a shortage of workers, The Deputy Minister pointed out that existing rules and regulations enacted by the Department of Fishery, Code of Conducts are agreed to by fishing raft workers and employers. This includes a 16-point employment contract that is carefully reviewed and is being revised given the current context. This stands in direct contrast with the meagre 4 point contract the investigation team uncovered. Season for change To conserve fish stock, prawns, and other aquatic resources the fishing season starts to close down in April of each year. According to a statement released by the Department of Fisheries on March 23rd, during the breeding season, (June 1 to August 31), a complete closure of the fisheries applies for all domestic and international fishing vessels in the Myanmar fishing industry. When the fishing season opens in early September 2020, the Mon State government will likely again have to address the migration of illegal fishing rafts into the east coast fishing blocks.

URL: <https://www.bnionline.net/en/news/sea-hunters-migrating-mon-state-east-coast-adding-fisheries-troubles>

Myanmar: How a Myanmar coast guard will contribute to coastal stability

Myanmar's enforcement agencies operate in a complex security environment. Several armed groups struggle for greater autonomy, ethnic violence has resulted in massive population displacement, and the synthetic drug trade has flourished. The destabilizing effects of Myanmar's land-based conflicts have begun to impact waterways. On October 26, members of the Arakan Army (AA) insurgent group based in Rakhine state raided a ferry to take police officers and soldiers hostage. Although the attack occurred on a river, the incident demonstrates the AA's growing capacity and interest in water-based operations. A dedicated coast guard will mitigate the maritime domain's vulnerability to exploitation by land-based illicit actors. By instituting a coast guard, Myanmar will increase coastal security without detracting from the

conventional, blue-water warfighting capabilities of its newly modernized navy. In the works since March 2019, a coast guard in Myanmar will offer technical skill sets, closer relationships with civilian agencies, and enhanced interoperability with land-based forces. The emphasis on technical skill sets and relationship-building improves the coast guard's efficiency and effectiveness in dealing with illicit actors.

Detailed knowledge on crime scene investigation techniques, gathering evidence for fishing violations, and search patterns for lost vessels provides coast guard personnel with the training needed to contend with civilian perpetrators of maritime crime. The specialized training optimizes resource allocation as coast guard vessels can often more rapidly identify and apprehend illicit actors. This leaves the army free to concentrate on training manpower in areas like contending with peer adversaries in conventional warfighting scenarios. The closer ties cultivated by coast guards with civilian agencies, like fisheries management, port authorities, and maritime police, provide opportunities for sharing information and building trust. The resulting increase in maritime domain awareness (MDA) hampers the ability of illicit coastal actors to exploit Myanmar's extensive coast, which includes 23,070 square kilometers of territorial waters. Working off information on trading routes and fishing zones gathered from civilian organizations, coast guard vessels can better identify and track the movements of artisanal fishing boats. Coast guard patrols, armed with this information, can help fill a gap in MDA, as Myanmar's coastal radar system has difficulty detecting smaller vessels and has limited range. The coast guard's closer relationship to civilian agencies helps agencies with overlapping jurisdictions work together. The sustained nature of violence in Myanmar's coastal states has forced water- and land-based forces to collaborate, especially through joint counterinsurgency operations in Rakhine state, Tanintharyi region, and the Irrawaddy delta. The porous border between the land and the sea creates the opportunity for smugglers, traffickers, and insurgents to resupply and reinforce their land-based operations. Dialogue with army intelligence units on topics like inland drug-trade routes and insurgency areas of operation addresses this interconnected nature of maritime and coastal crime.

Maritime enforcement efforts, however, have nominally been subordinate to land-based operations of the army, which number roughly 375,000 compared to the navy's 16,000. As highlighted in the *Stable Seas: Bay of Bengal maritime security report*, this asymmetrical approach to enforcement detracts from a country's ability to comprehensively address security challenges. Myanmar plans to also create a unified command center alongside the coast guard, staffed by experts from the Maritime Police Force, Immigration Department, Customs Department, Marine Administration Department, and the Myanmar Port Authority. Including land-based stakeholders and military officials in their meetings will facilitate understanding of how the maritime domain affects coastal security. By using the command center as a medium to convey information between land- and water-based agencies, a holistic strategy can be developed to contend with illicit coastal actors who move fluidly between domains. As nonstate actors like the Arakan Army increasingly contest government control of coastal waters, it is imperative that Myanmar focus on coastal security. The specialized abilities of the coast guard build on the lessons learned from the Sri Lankan counterinsurgency operations against the Tamil Sea Tigers, where focusing on nontraditional maritime security threats helped turn the tide of war. By similarly acknowledging the important role played by the maritime domain in supporting coastal stability, Myanmar can counteract the emerging threat. The coast guard and its associated

command center can address law enforcement shortcomings by capitalizing on their civilian ties and collaborating with land-based military units. Working alongside the navy, the coast guard can significantly improve overall maritime stability in territorial waters.

URL: <https://thediplomat.com/2020/04/how-a-myanmar-coast-guard-will-contribute-to-coastal-stability/>

Myanmar: ASEAN leaders hold virtual summit amid COVID-19 pandemic

Forced apart by the coronavirus pandemic, Southeast Asian leaders linked up by video Tuesday to plot a strategy to overcome a crisis that has threatened their economies and kept millions of people in their homes under lockdowns. The 10 leaders of the Association of Southeast Asian Nations held further talks later in the day, also through video conferencing, with their counterparts from China, Japan and South Korea, who expressed support in helping ASEAN fight the coronavirus. Vietnam, ASEAN's leader this year, has postponed an in-person gathering tentatively to June. "It is in these grim hours that the solidarity of the ASEAN community shines like a beacon in the dark, Vietnamese Prime Minister Nguyen Xuan Phuc said in an opening speech. Containment efforts have placed the pandemic "actually under control, he said, warning against complacency, with a number of member countries, including Indonesia and the Philippines, fearing spikes in infections after large-scale testing is conducted. Founded in 1967 in the Cold War era, ASEAN a diverse bloc representing more than 640 million people has held annual summits of its leaders and top diplomats with ceremonies steeped in tradition, protocol, and photo-ops. Derided as a talk shop by critics, the bloc is known largely for photographs of its leaders locking arms at annual meetings in a show of unity despite often-thorny differences. Diplomats say that unity is now crucial as the region battles COVID-19, the disease caused by the coronavirus.

All of ASEAN's member states have been hit by infections, with the total number of confirmed cases reaching more than 20,400, including over 840 deaths, despite massive lockdowns, travel restrictions, and home quarantines. Chinese Premier Li Keqiang said the pandemic has had a severe impact on the global economy, but he told fellow leaders that their countries have jointly confronted past crises and have braced for contingencies. "The battle against COVID-19 has made us more aware that we are in a community with a shared future, Li said. Japanese Prime Minister Shinzo Abe said Japan will help Southeast Asia fight the outbreak, including by the establishment of an ASEAN center for infectious diseases. South Korea, among the Asian nations battered by the pandemic early, "confronted numerous challenges head-on and is now gradually heading into a "phase of stabilization, South Korean President Moon Jae-in said. Intensive testing and tracing, public cooperation, and transparency "have proven to be indispensable in our fight, he said. "The COVID-19 crisis is a crisis like no other in the past, not just in its potential calamitous scale but in the hope to contain and stop it by unstinting cooperation and fullest trust between all countries, said the Philippines' Department of Foreign Affairs. "If any of us fails, the rest will follow. The World Health Organization called on Southeast Asian countries last month to aggressively ramp up efforts to combat the viral outbreak as infections spread. Several visiting participants of a large religious gathering in Kuala Lumpur, Malaysia, in late February reportedly tested positive for the virus after attending the

event. But Vietnamese Foreign Minister Pham Binh Minh said ASEAN had responded to the outbreak quickly, with his country, as the bloc's current leader, calling for the need for region-wide action in mid-February, followed by a series of ministerial meetings and consultations with China, the United States and the WHO.

Tuesday's summit included discussions on a regional stockpile of medical equipment for emergencies and establishing a regional fund for combating the pandemic. With travel restrictions and lockdowns across the region, many industries have been hit hard, including the tourism and retail sectors, and growth targets have been revised downward. The overall economic impact of the pandemic on the region will "likely be broad and deep, according to an ASEAN assessment. Hard-hit China, where the virus was first detected in December, is one of the largest trading partners and sources of tourists for Southeast Asia. ASEAN holds about 1,500 meetings a year, but around 230 have been postponed to later this year due to the pandemic, including lower-level meetings with China on a proposed nonaggression pact in the disputed South China Sea. The territorial disputes, which involve China and five other claimants, including ASEAN members Vietnam, Malaysia, the Philippines, and Brunei, are not part of the formal summit agenda. But the disputes have cast a shadow on the summit after a Vietnamese fishing boat with eight men on board was hit by a Chinese coast guard ship and sank recently near the Paracel islands. All the fishermen were rescued. The other ASEAN members are Cambodia, Indonesia, Laos, Myanmar, Singapore, and Thailand.

URL: <https://thediplomat.com/2020/04/asean-leaders-hold-virtual-summit-amid-covid-19-pandemic/>

Myanmar: Inland fisheries and aquaculture: A decade in review by WorldFish Center

This publication reviews the current state of knowledge of inland capture fisheries and aquaculture in Myanmar, using data from the past decade. The book aims to highlight challenges and opportunities in Myanmar's fisheries sector, and to contribute to information sharing and capacity building for better management and sustainable use of the country's inland aquatic resources. This review contains information about the role of fisheries and aquaculture; economy, value chains, export and trade; governance; management practises; data collection and information systems; and areas for improvement.

URL: <https://www.worldfishcenter.org/content/myanmar-inland-fisheries-and-aquaculture-decade-review>

Myanmar's fishery exports cross \$449 mln in 2019-2020 FY

Export earnings from the fisheries sector during the period between 1 October and 13 March in the 2019-2020 financial year reached US\$449.669 million, an increase of \$56 million from the year-ago period, according to statistics released by the Commerce Ministry. Myanmar exports fisheries products, such as fish, prawns, and crabs, to markets in 40 countries, including China, Saudi Arabia, the US, Japan, Singapore, Thailand, and countries in the European Union.

However, Myanmar's fishery export volume is much lower compared to neighboring countries. The Myanmar Fisheries Federation (MFF) is making concerted efforts to increase fishery export earnings by developing fish farming lakes that meet international standards and adopting advanced fishing techniques. The MFF plans to establish fish lakes, aqua feedstuff processing factories, cold storages, and packaging factories, in cooperation with foreign experts. There are over 247,000 acres of fish farms and 240,000 prawn breeding farms across the country. Myanmar exported 340,000 tons of fishery products worth \$530 million in the 2013-2014FY, 330,000 tons worth \$480 million in the 2014-2015FY, 360,000 tons worth \$500 million in the 2015-2016FY, 430,000 tons worth \$600 million in the 2016-2017FY, 560,000 tons worth \$700 million in the 2017-2018FY, and over 580,000 tons in the 2018-2019FY, according to the Commerce Ministry.

An MFF official said the federation has requested the government to address problems faced in the export of farm-raised fish and prawns through G2G pacts and ensure smooth freight movement between countries to bolster exports. Myanmar has been negotiating with China to export more fishery products through G to G pact. More than 110 Myanmar companies have been allowed to export 101 items of fishery products to China. According to the MFF, integrated poultry and fish farming cannot ensure food safety, which is a prerequisite for export. Therefore, the federation has asked for the formulation of a law to restrict that kind of mixed farming. Fish farming must be conducted as a large-scale project to gain access to Project Bank loans, according to the federation.

URL: <https://www.globalnewlightofmyanmar.com/myanmars-fishery-exports-cross-449-mln-in-2019-2020fy/>

Myanmar continues to export seafood to China, despite COVID-19 hurdles

Despite the global spread of the novel coronavirus, Myanmar has been able to continue exporting fisheries products to China, its main market, The Myanmar Times reported 12 March. China, the main market for fisheries products from Myanmar, officially announced the outbreak of the deadly virus in late January and Myanmar's exports were slightly affected in early February as a result. But the impacts on fisheries products were not as serious as on the country's agricultural products exports, according to Myanmar Fisheries Department's head, U Myint Than. About 4,000 metric tons (MT) of fisheries products, including pike, flounder, white pomfret, yellow pike conger, carp, pufferfish, prawns, and squid, were shipped to China through Muse border gate between 1 to 8 March. The exports were worth USD 3.12 million (EUR 2.8 million). Another border trade route, the Chin Shwe Haw, saw shipments of 28.23 MT of fisheries products, comprising eel and pike conger, in the same period, with the export value of USD 72,075 (EUR 64,175). Myanmar restricted export activities via Chin Shwe Haw in February at the height of the COVID-19 outbreak in China.

Between 1 October, 2019, and 28 February, 2020, Myanmar exported fisheries products worth USD 415.3 million (EUR 370 million), an increase of 14.9 percent from USD 361.5 million (EUR 322 million) in the same period of 2019, according to Myanmar's Ministry of Commerce. Boosting exports of fisheries products is one of the main priorities during 2020-2025 set by

Myanmar government in its national export strategy, Eleven reported 14 February. However, the government has given top priority to farming rather than fisheries, Myanmar's fisheries department said, in order to meet ambitious goals for increasing the country's economic production. According to Myanmar Fisheries Federation Chairman Htay Myint, Myanmar plans to work with Indonesia, Taiwan, and China to increase its processing and cold-storage capacity, with the goal of gaining revenue of USD 3 billion (EUR 2.67 billion) from the fisheries sector. Myanmar's fisheries products exports in the financial year ending 31 March, 2019, hit a record USD 720 million (EUR 641 million) in value, Myanmar DigitalNews reported in September.

URL: <https://www.seafoodsource.com/news/supply-trade/myanmar-continues-to-export-seafood-to-china-despite-covid-19-hurdles>

Country Fisheries Trade: Myanmar

The Republic of the Union of Myanmar has a total land area of 676,580 km² and it is bordered by Bangladesh and India in the Northwest, China in the Northeast, Lao PDR in the East, and Thailand in the Southeast (Figure 1). Its exclusive economic zone (EEZ) is about 486,000 km² and the 2,138 km coastline is along the Indian Ocean, Bay of Bengal, and Andaman Sea. The inland water bodies consist of 8.2 million ha of lakes, rivers, and reservoirs and the main rivers include Ayeyarwaddy, Chindwin, Sittatung and Thanlwin. The climate of the country is tropical monsoon and has low humidity during winter. Myanmar's population was approximately 54 million in 2017. The country is known as the Golden Land because of many golden pagodas all over the country. The capital city is Naypyidaw while the largest city and economic center is Yangon (STIP, 2019). The official language is Myanmar and the regional local languages are Kachin, Kayah, Karen, Chin, Mon, Rakhine, and Shan. Fisheries Sector The Department of Fisheries (DoF) is the responsible government agency for the development and management of the fisheries sector of Myanmar.

In 2017, the livestock and fisheries sectors contributed 8 % the national GDP and the annual fish consumption per capita was 66 kg. The fisheries sub-sectors are aquaculture, inland fisheries, and marine fisheries. For aquaculture, the culture environments include fresh water, brackish water, and marine. Freshwater aquaculture has a total area of about 198,840 ha and mostly located in the southern part of the country, particularly in the Yangon, Bago, and Ayeyarwady regions. Rohu (*Labeo rohita*) is the dominant cultured species and 75 % of the production is for export (DoF, 2018). Inland fisheries cover leasable fisheries and open fisheries. For leasable fisheries, the fishing rights are granted under a lease by the DOF subject to stipulation relating to the area, species, fishing implement (gear), period, and fishing method. For open fisheries, fishing activities are permitted by the issue of fishing implement license or by floating tenders after specifying fishing ground, with the exception of the areas specified by DOF for leasable fisheries. The fishing operations of marine fisheries are categorized as offshore and inshore. For the inshore fisheries, the traditional fishing boats are not more than 30 ft and less than 25 HP engine which operate within the area from shoreline to 10 nmi. For offshore fisheries, the fishing vessels are more than 30 ft long with 25 HP engine which operate from the outer limit of the inshore fishing zone to the EEZ (DoF, 2018).

For fishery statistics, the data recording follow the country's fiscal year which commences from 1 April of the current year to 31 March of the following year. From the fiscal year 2008-2009 to 2017-2018, the total fisheries production of Myanmar was continually increasing (Figure 2). In 2017-2018, the total fisheries production was about 5.88 million t (19 % from aquaculture, 6 % from leasable fisheries, 21 % from open fisheries, and 54 % from marine fisheries). Fisheries Trade As shown in Figure 3, the fish and fishery products are transported to the fish landing sites or jetties for auction/wholesale/retails in market, and processed for export. The main jetties approved by the EU, i.e., Shwe Yaw Hein and Annawa Aung, are located in Yangon (Figure 4). For the Shwe Yaw Hein jetty, it caters more than 180 vessels and complying with good manufacturing practices (GMP) and the Hazard Analysis and Critical Control Points (HACCP), it serves as the main source of exported raw materials. Export of fish and fisheries products – The quantity and value of fish and fishery products exported by Myanmar from the fiscal year 2008-2009 to 2017-2018 are shown Figure 5.

The major fish and fishery products include fish, prawn, and others (crab, eel, dried prawn, and fish meal). – In 2017-2018, Myanmar exported 10 % of the total fish production which was around 568,227 t with the value of about US\$ 711 million. The soft shelled crab had the highest price among the exported fish and fishery products which was sold at US\$ 9.21/kg (Figure 6) and Thailand was the top most country of destination (Figure 7). Major Issues – Unstable price of exported Rohu species because the price is higher in the upper region than in the lower region due to higher transportation costs – Unreliable food safety management because of weak coordination among responsible agencies in implementing the existing laws and regulations – Inability of local fish farmers and processors to comply with the food safety requirements of other countries because of insufficient budget support for modern facilities and equipment – Directive 2/2015 (Technical Regulation for Export and Import Fishery Products) – consumer safety and qualification of the fishery products and compliance with the ASEAN Economic Community and the international standardization – Directive 8/2018 (Amendment of Directive No.2/2015) – fishery establishments should practice food safety activities throughout the supply chain such as in fishing, aquaculture, fishing vessels, landing sites, auction markets, feed plants, ice plants for fishery products, and processing establishments complying with the requirements of international markets in the ASEAN Member States, China, and other countries.

Myanmar is a member and signatory of the following bilateral, multilateral, and international agreements: – Bilateral Agreements (Sri Lanka, Bangladesh, China, South Korea, Lao PDR, Malaysia, India, Philippines, Thailand, and Viet Nam) – Border Trade Agreements (China, India, Bangladesh, Thailand, and Lao PDR) – Free Trade Agreements (China, Hong Kong, Japan, South Korea, India, Australia, and New Zealand) – Trade and Investment Framework Agreement (USA) – Investment Protection Agreement (EU) – Multilateral Free Trade Agreements (Australia, New Zealand, China, India, Japan, and South Korea) – Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation – World Trade Organization In collaboration with the SEAFDEC Marine Fisheries Research Department (MFRD), DoF implemented the project 'Traceability Systems for Aquaculture Products in the ASEAN Region' from 2010 to 2014, which aimed to expand fish trade and enhance competitiveness of fish and fishery products for regional and international trade. At present, Myanmar is now applying the traceability systems in the supply chain of aquaculture products. Moreover, the country's aquaculture products can be exported nowadays to the EU because of the development of the

National Residue Monitoring Plan supported by the EU. The DoF, in cooperation with EU-GIZ, has implemented the Myanmar Sustainable Aquaculture Program (MYSAP) since 2017 in order to improve the aquaculture production and income through sustainable aquaculture by applying the good aquaculture practices (GAqP). The EU continues to provide the training on GAqP for awareness raising and capacity building of DoF staff and stakeholders.

URL: <https://www.marketscreener.com/news/Country-Fisheries-Trade-Myanmar--30185133/>

Myanmar launches aquaculture roadmap

The government has launched a national roadmap for the aquaculture industry to outline the ways it intends to develop the sector and to illustrate the market opportunities and hurdles. The Ministry of Agriculture, Livestock and Irrigation launched the National Aquaculture Development Plan 2019-2023 on March 13. The plan aims to provide policy and institutional framework for sustainable development of Myanmar's aquaculture sector. As Myanmar's aquaculture sector is reducing its reliance on capture fishery, the National Aquaculture Development Plan will highlight the list of actionable priorities to address the needs and utilise the tangible benefits of the sector, said agriculture minister U Aung Thu. The National Aquaculture Development Plan will be in close alignment with other economic development plans such as the Agricultural Development and Investment Strategy, Multi-sectoral National Plan of Action on Nutrition and Myanmar Sustainable Development Plan. The MSDP is the economic blueprint by the NLD-led administration. Although there is strong potential in the aquaculture sector, its development has been hampered by various factors including its previous isolation from global markets, lack of investment in infrastructure, insufficient access to finance and a shortage of technical skills and know-how, stated the roadmap.

The output of aquaculture increased incrementally at 4 percent every year from 0.75 million metric tonnes to 1.13 million metric tonnes between 2008 and 2016 while the output of capture fishery rapidly rose at 7.47pc annually from 2.77 million metric tonnes to 4.74 million metric tonnes. Since 2016 the growth rate of aquaculture has risen markedly at 3.38pc in 2016-2017, and 7.79pc in 2017-2018, while that of capture fishery decreased at 1.1pc in 2016-2017, and 2.6pc in 2017-2018. The NADP also revealed the strengths of the aquaculture sector, notably a large and young labour workforce, as well as surplus fallow and vacant land in various states and regions which also possess water resources to develop the industry. Weaknesses are primarily the limited capacity of feed production and an insufficient supply of high-quality feed, poorly integrated value chain with limited market access and integration, poor farm management and lack of technical capacity. Developing the aquaculture sector will create plenty of employment opportunities in rural areas.

The lack of aquaculture is also due to limited access to finance and capital, increasing input costs making operations less competitive, a weak investment climate, and poor transport and energy infrastructure. "The ministry intends to work with all relevant government ministries and institutions, small-holding fish farmers and private sector aquaculture firms, private sector associations, academic institutions, NGOs and development partners to implement the NADP effectively and efficiently, said U Myint Zin Htoo, deputy director general of the fisheries

department. The NADP outlines a broad range of activities to achieve as many as 33 aquaculture development targets. It has a budget of US\$125.7 million from 2019 to 2023.

URL: <https://www.mmtimes.com/news/myanmar-launches-aquaculture-roadmap.html>

Why study of oceans matters to Myanmar and India

The study of the oceans is crucial for countries such as India and Myanmar because it helps governments to predict and manage responses to climatic and ocean changes, particularly monsoon rains and drought, and the dangers posed by potentially deadly cyclones. Mizzima recently interviewed an Indian oceanography specialist Dr V Ramaswamy in Goa, India to discuss his work and cooperation with Myanmar to keep a close eye on the oceans and to allow the countries a better chance of handling extreme weather conditions – not least the type of damage seen in Myanmar as a result of 2008 Cyclone Nargis. I am a scientist specializing in oceanography, and marine geology and biogeochemistry. I have been working as a scientist at Aquamarine Coastal & Environmental Solutions, Goa, since 1981, when I joined as a research fellow and as a scientist in 1983, and even now my interest is basically science of the Indian Ocean and the surrounding regions. My main focus has been to work in collaboration with neighbouring countries because oceanography is a very expensive subject because we need ships to study the oceans and ships are very, very expensive. So that is why collaboration and cooperation with all the countries is very essential. And as part of my studies I have been very fortunate to involve in many surrounding countries and also the advanced countries of Western Europe. In this particularly I have worked extensively with many countries like Iran, Kuwait, Bangladesh and most important, Myanmar.

Our collaboration with Myanmar was started in the year 2002. In 2002, the Government of Myanmar approached the Indian Government to study the northern Andaman Sea. So as part of that within a few months we organized the most advanced vessel ... and this vessel sailed for 35 days from Chennai to the northern Andaman Sea and back. There were twelve people from Myanmar and nineteen from India. The twelve people from Myanmar included people from Yangon University, ministry and fishery research, hydrographic department, and methodology and hydrology. So there were twelve scientists from Myanmar, including some lady scientists, there were three of them who came to India and we went on this cruise, we studied the northern Andaman Sea. The most important part of the cruise was we stayed in Yangon for three days and in the three days the ship was open to all the students, college and school students from Yangon and neighbouring areas, about 800 students came and saw the ship, and you know in 2002 that time Myanmar did not have these facilities, it had very poor facilities, so these students for them it was a very good opportunity to come and see a very modern research vessel. After we completed the work, some other scientists came to India.

Now this cruise was the turning point in oceanographic studies in the northern Andaman Sea because the last cruise in the oceans was done in the 50s, very, very absolutely no data. So this cruise of 35 days where India and Myanmar scientists participated has shown a very good understanding of the Andaman Sea, both in terms of climate, in terms of geology, in terms of fisheries, in terms of meteorology, every aspect, it has given a lot of information. And I will not

say that I am boasting but it is really true, I will give a small incident three days back, just three days back I got an email from one American professor who has carried out work in the northern Andaman Sea and he has sent me an email where he says our work has achieved so much and this could only have been done because of the study carried out by NIO and our scientists in 2002. That is great. In 2018 I was in Myanmar for a workshop, and at that time there was a big opening, and an invitation by the Myanmar government to call people and scientists from all over the world to participate in exploring the northern Andaman Sea and the coast of Myanmar. The reason, as I already mentioned, the ship is very, very expensive, and it costs about in Indian rupees, 500 crores at least, and daily it will be requiring about \$40,000 per day. So it is expensive. So they have invited people from all over the world, so our views were sought, and many countries said that the basis of the studies is the work done by India and Myanmar in 2002. That was a landmark study. I am happy to note the big achievement and collaboration in that project.

Why did you choose the northern Andaman Sea, in terms of location, what were the reasons and how many Indian scientists were involved in that project? We chose the northern Andaman Sea because it had not been studied at all. The reason is why we have to study the oceans is not only for the mineral resources or the fisheries resources but most important for climate because you know the monsoons are both the lifeline for India, Bangladesh and Myanmar. We depend upon the monsoon rain, and including Thailand also, Malaysia, the entire region depends upon the monsoon. Our economy is driven by the monsoon. If it were not for the monsoon rain we would not get any agriculture and everything that depends upon that. Now the monsoon derives its moisture from the oceans, so the state of the ocean, the temperature, the circulation, all that is very important. It is also important on a daily basis because for example, if you take a tropical cyclone, the path of movement of a cyclone depends on the pressure of the water as well as the land. For example, tropical cyclones will form only when the temperature of the sea surface temperature, or surface of the sea, will have more than 27 degrees Celsius. If the water is colder than that, cyclones will not form. If the water is warmer than that then cyclones will form because the excess energy in the oceans, so this energy is transported to the atmosphere and contributes to cyclones.

So the basic understanding of oceanography is very important for all aspects including very specific problems why the Mawlamyine harbour is getting silt up. It was a very important harbour once upon a time but there is so much sediment coming. Why is it getting silted up when for hundreds of years it was working, last forty years a few metres has come. So that depends upon the circulation. And this area is very interesting scientifically, it can teach us many, many things. For example the tides there, it is a macro tide, there are several tides in the Gulf of Martaban. This huge rise and fall of sea will effect everything there. The fisheries depend upon the rise and the fall of the sea, right, because the mud that comes in gives nutrients but also it makes the fish go back and forth. So that is the exploration for gas and sources. For example, I read recently, within the last few days, that a new gas field has been discovered in the Gulf, right. I have just read about this, I have been in touch, updated, very much so. Coming back to the cyclone pattern, how has it changed in Myanmar and also in India. We used to have a cyclone in July. Has that changed a lot? I will tell about that. I have been studying cyclones for quite some time. I have some special papers on cyclones, especially the effect of what it does.

Now one of the things about cyclones is for the last one hundred years has been mapped, most of the cyclones start in the southern Bay of Bengal and the Andaman Sea, southern Andaman Sea, and they travel westwards to the Indian coast. Mostly. A few of them will go to Bengal or Bangladesh coast, that is a normal pattern. Cyclones normally will form before the monsoon or after the monsoon also. During the monsoon you don't have cyclones because there is a horizontal shear, the winds are so strong that the cyclones are normally 10 kilometres in height, now this is cut off by the monsoon. So that is why cyclones do not develop when the monsoon is very strong. So before the monsoon when there is no shear, the cyclones are forming, in the month of May, and the month of September, October to December. Now this is normal periods. October to December is the cyclone period. Now they form in the southern Bay of Bengal and Andaman Sea and travel westwards.

Now there has been a change in the cyclone patterns because of climate change and also the low pressure that has been formed. What is important to know is cyclone, once it is formed, it starts rotating, it starts moving in a particular direction a low pressure, the whole system moves. Now this system when it moves, not only is it moving towards India but now we find that there are more cyclones that are going towards Bangladesh and Myanmar. And not only weak cyclones but very strong cyclones. Very strong cyclones are formed and they are going towards Bangladesh and Myanmar and this is because of climate change, because of the increasing temperature. What I told you was 27 degrees is the optimum temperature and cyclones basically transfer the energy from the ocean to the atmosphere. Because the oceans are getting hotter, we are getting more severe cyclones. Even supercyclones are recently formed in the Arabian Sea also right.

Now the second thing about cyclones is when they are formed they are going in a new path towards the northern and northeastern part like Myanmar. The second part is, these regions since they did not experience cyclones in the past, so what they have done is the natural protection system along the coast has been utilized, for example the mangroves. The mangroves, which are a natural protection against cyclones, have been very severely destroyed, mostly for shrimp farming or for land use. In the case of Myanmar, since there were no cyclones in the 19th century and 20th century what happened was the British, at that time mostly in the northern part of Myanmar, they moved a number of people to the southern part, to the rice fields of Myanmar. For example, the Irrawaddy Delta was full of mangroves, so they have cut out all the mangroves and made it into a rice bowl, which is one of the reasons why it is biggest source of rice in Asia. Now, once you have cut out all of the mangroves, because there was a very steady climate, right, and all the rice was irrigated, and people were very prosperous and that is why Yangon became the capital city. But what happened recently is cyclones have come to that area and there is no mangrove left. I have studied satellite images and I have found that there is only one island in the entire Irrawaddy coast which has got proper mangroves.

Only one island out of hundreds of islands, hundreds of small rivulets, all the mangroves have been removed and people are staying there. So now when the cyclone comes, the whole area is flooded and that is why the Nargis cyclone was such a disaster, right, because of the climate change, and land use pattern change. So in the olden times when cyclones come, there was nobody staying there much, and the areas are protected but now unfortunately there are hardly any mangroves, we can see that. So now one of the suggestions is to replant mangroves along the

coast, it is what I would suggest. All these are linked to the climate change, what is the climate change concept in general? Climate change is the change in climate is obvious on that. What is it due to? The earth is driven, we have the atmospheric circulation and the ocean circulation. The water moves and the atmosphere also moves. This movement is controlled by the sun, energy from the sun. So the energy from the sun comes and heat the ocean and the land, the water and the air move and that is why we get a particular weather climate. Now what is happening is the amount of heat trapped within the earth is dependent on certain gases. Like we all now carbon dioxide and methane, or even ozone, or nitrous oxide, these are other gases that are present already in the atmosphere which are trapping the energy from the sun and driving the climate. So if we change the concentration, the most important is carbon dioxide, if we change the carbon dioxide in the atmosphere, then the earth will get heated up more. If the earth gets heated up more, the water gets heated up, and the land gets heated up. And because of that the atmosphere circulation pattern changes. For example, the land gets heated up more, so low pressure and more wind will come, the winds will get stronger. There are many, it is a very complex system but in effect the earth gets warmer then the atmospheric pattern, the climate pattern changes. Now the monsoon, which is most important for us, is driven by the pressure difference between the land and oceans, that is primarily due to the heating difference. For example, during summer the land is hotter than the ocean, that is when the wind from the ocean comes to the land.

So in normal monsoon, during May, June, July, when the earth is very, very hot, the Asian landmass is very hot, the air from the Indian Ocean and from the Bay of Bengal sea, all come to the low pressure in Tibet, Tibet is the centre of the low pressure, so the wind will come in that direction, and because of something known as Coriolis Force, it starts bending towards the west, so that is why the northern winds become southwestwards. That is why we call it the southwest monsoon, which is there during June to September or October, right. Now in winter the land is colder and the ocean is warmer, so we have the northeast monsoon. But the southwest monsoon is most important because most of the rainfall comes during that period fro India and Myanmar. Now, what is happening when the land is getting hotter, and the oceans are also getting hotter, the climate pattern is changing. So what is happening right now is that the monsoon will change. Now, something very funny that you must have noticed, India is in the border, this side is all wet, India, Myanmar, Bangladesh, Malaysia and Thailand, all are wet regions, with heavy monsoon, and if we look to the other side, towards the western side, Pakistan, Iran, Middle East, all are dry. We are exactly the border between the wet side and the dry side. If the whole pattern shifts then all these countries will get affected, and that is what is happening, the change in pattern it is predicted that some countries will get benefitted and some countries will not get benefitted by climate change with more monsoon.

But whatever happens if there is a change in climate, we will need to adapt, and it is not normally good. So this is caused due to increasing greenhouse gases, which has been there historically because we have cut a lot of forest in all the countries, and the population is changing, we are using a lot of fossil fuels. We know the general reasons for climate change. But how the monsoon is getting affected is very important and to study the monsoons it is very important that we also study the oceans and the conditions and circulation of the oceans, and the temperature of the oceans, which is very, very necessary, and since it is expensive, all countries must collaborate, cooperate, to study the oceans.

In Goa I met some people on this short trip but everyone keeps saying that getting fish, fish prices are increasing, and the fishing trawlers say they get less fish, many companies have stopped. What happened? Is that related to the monsoon, climate change, all these things? It is a very important question you have asked. It is very, very important because most of the coastal areas, people traditionally are dependent on fish as a source of protein. And now because of transport, even inland people depend upon fish. Fish is a very important source of energy and proteins. Now the fishes in the sea, many of them along the coast, coastal zones are very important for fisheries, they come to the mangrove areas and they will breed and they have a life cycle between that. So their conditions are normally governed by the conditions of the sea. So I would say one part is climate change, specifically in temperature, availability of nutrients, and availability of protected breeding zones, are one cause of loss of fisheries. The amount of fishes of fishes catches drop is phenomenal, it has affected all countries. In India the price of fish has gone up very much. In Myanmar too. Of course part of the rise in price is due to increased consumption, but mainly it is due to a drop in fish catch. Now the reason for that, as we just mentioned, is due to climate change. Okay because a certain group of fisheries are replace the normal fish, we find a new breed of fish are found. Now the reason for that is climate change both directly and also indirectly. So there are some papers that are showing that, especially the Arabian Sea and Bay of Bengal, has got something which is known as the oxygen minimum. Okay, because the amount of oxygen in the lower part of the sea, below 200 metres, it is very low.

Why is it low? Actually, it is very simple to understand. You see the Atlantic and Pacific oceans are free flowing from North Pole to South Pole, whereas the Indian Ocean, the northern Indian Ocean particularly, is covered in land, so there is a land barrier, the circulation is not so much, so it is more stagnant, right. So because of this, there is something known as oxygen minimum in the Arabian Sea and Bay of Bengal and they release gases. One of them is nitrous oxide and it is part of the carbon cycle. Now what is happening is in the Arabian Sea and part of the Bay of Bengal, the plankton is changing, because of the climate change, the plankton is changing, because of this the secondary producers, the zoo plankton, which feed on the other plankton, they are changing. Because they are changing, the fisheries is changing, so the type of fish is changing, so because the type of fish is changing, then people don't know how to catch the new type of fish. So that is one reason. The second reason, which is more economic, is overfishing. Okay, we are overfishing because it is such an important source of protein and everybody is going out to fish. We have new technology and we have bigger fishing trawlers, and bigger nets. Indiscriminate fishing it is called. You don't look at a certain type of fish. You have all the type of fish, small and big, and using the bigger fish for consumption and the smaller fish for fertilizers, things like that, you are taking away the breeding fishes, right. And third most important, I told you, is the mangroves, which are the breeding grounds. By removing all the mangroves, we are removing the breeding ground for that.

So these three changes. Climate change, the plankton change, the second thing is overfishing, and third the removing of the breeding grounds are the primary reasons for the change in fishing. Let me touch on the rise in sea level. Are they really serious with the suggestion about the rise of sea level and it really threatens the existence of certain cities and low-lying areas, particularly some areas in Myanmar? Okay, sea level rise is true. They better accept it that it is happening. And here, how do you measure sea level change? The level of change is in a few millimetres per

year, less than a millimeter or a milimetre, that is the range of the sea level rise. Now it may seem very, very small, what does a millimeter change going to do? But it is very important. So what we have done, India has sea level changes, what is known as tide gauge. So we have put a number of tide gauge along the Indian coast, and as part of the collaboration also set up a number of tide gauges in Myanmar. The Indian government and the Myanmar government had collaboration around the same time in 2002 onwards set up a number of tide gauges along the Myanmar coast also and they are monitoring the rise in sea level. Though is it only a few milimetres but over a longer period of time, over 50 or 100 years or time, it is going to be very significant. Why? For example, I will give you an example. Suppose you have a port, harbour, and the water has to be a few centimetres below the jetty, the ship can come there. If the water comes above that, then the whole jetty is flooded. So if the jetty is flooded, to build a new jetty, how much is this going to cost? You know the cost of building this is very very high. That is the lesser part. The more dangerous part is the flooding of the land. Now, if I look at Myanmar and Bangladesh, also is very similar, Myanmar has also got an Irrawaddy Delta. Now delta means it is very low-lying. And delta is formed by sediment from the river being dumped into the oceans, all around the coast, so Irrawaddy Delta is very big, it is more than 200 or 300 kilometres, from the coast.

The entire area is very, very flat and full of rice fields, and rice fields we know is very flat, and then you have the mangroves as protection. Now the entire Irrawaddy Delta is very flat and almost a few centimetres to a metre about sea level. So if the sea level rises along the Western Ghats which we have studied, along Goa, only certain portions will be affected, that are low lying, and we have a mountain near to the coast. So it will not be affected so much. It will be affected but so much as the Irrawaddy Delta, which could be flooded for tens of kilometres. Not only tens, more than that. Now what happens when the sea level rises, not only the sea level rise, along with that you take the cyclone coming in, so when a cyclone comes in there is something known as a storm surge, the storm surge can bring in water a few metres above. So every centimetre of land is important. So a combination of sea level rise and a storm surge due to cyclone can be very devastating, as in the case of Cyclone Nargis. So to control the damage, what can we do? To control the damage, I think that it is very important that coastal areas of Myanmar should be reforested, generation of mangroves is probably the most important suggestion I can give.

Apart from that I think scientific studies need to be carried out, the younger generation needs to be educated about this, so that together they become aware of that. These are the normal suggestions I would give. Replantation of mangroves and studying the coastal areas is very important. You know we had a huge disaster when Cyclone Nargis hit in 2008. You started the collaboration and you were involved in that. Has the situation of Myanmar improved in terms of collaboration and the capacity and handling all these things? Yes, that is a very important question. And I think that I am very happy to say that my collaboration started in 2002 and I am keeping in touch with most of the scientists there, and I have been, as I told you, in 2018, I have been to Myanmar, so I am very happy with the changes which are taking place. The education has improved very much, the facilities have improved very much, the laboratories have improved very much, the teaching has really seen change, and most important I think that Myanmar is now open for collaboration with many, many countries. I have right now I know my colleagues from around the world, from the United States, from Korea, from Japan, from China, from India also,

many of them are collaborating very actively with Myanmar. I would only say for the benefit that Myanmar students, Myanmar scientists, Myanmar education experts, should collaborate, take this opportunity more. They should make use of the opportunity and go for collaborative studies. They should take a lot of opportunities for them to go abroad and finish their education. They can go for short-term courses or long-term courses. They can write to for example National Institute of Oceanography or other institutions and look for scholarships and studies. They can come here, learn with us, and since the collaboration is already going on, you can really understand this far better. You see nowadays the biggest change that has taken place is all over this country is the freedom to talk through mobile phones. It has really changed. The last time when I was there, communications improved tremendously in Myanmar. It has so much improved. Because of that you are able to download and access the internet, study the latest.

So I think that there has been tremendous change in terms of education. Only think what you need to do is know that there are opportunities. You just have to write to any of the oceanography institutions around the world, look at ongoing collaboration and take part in the collaboration to study the oceans, especially the area around Myanmar because it is rich in minerals, rich in gas, rich in fisheries, and it is also important for climate and also important for cyclones. Have you any additional comments you would like to make? I think the additional comments I would like to make that historically Myanmar and India are very closely connected and especially where I come from, Tamil Nadu, people in Tamil Nadu have a special affection for people from Myanmar. They have a very special affection. So when I went for this I started in Chennai, in every Chennai newspaper has a front page full page news about Myanmar because they have a special connection with Myanmar. Historically, we have our declarations, we all know the last king of India had been exiled in lived in Yangon and the most beloved king from Myanmar. King Thibaw, he spent his last days in Ratnagiri. It is a very nice building they have there. And the wife and children and grandchildren of King Thibaw are very well loved and respected in India. Apart from that, what I find is that the people from Myanmar are extremely warm-hearted. The culture is so nice, I feel like going there many, many times. And now it has opened up it is easy to go to Myanmar for cultural reasons. I find it very, very fascinating. It has got a lot of diversity, which is interesting from any point of view and the special connection and the warm heartedness of the Myanmar people is what brings me to Myanmar time and again.

URL: <https://www.bnionline.net/en/news/why-study-oceans-matters-myanmar-and-india>

Myanmar's fisheries exports not as badly hit as agriculture by virus

As the number of coronavirus cases started rising in China in January, exports of Myanmar's fisheries products declined slightly in early February. Unlike with agricultural products, sales of fisheries products have not been as severely impacted, said U Myint Than, head of the Fisheries Department, on Tuesday. Some 4000 tonnes of marine products worth more than US\$3.12 million (K4.3 billion) were exported to China via Muse border trade route from March 1 to 8. The exports were mainly pike, flounder, white pomfret, yellow pike conger, carp, puffer fish, prawns, and squid. Exports through Chin Shwe Haw border trade point declined in February, but fishery products particularly eel and pike conger or sea eel totalling 28.23 tonnes worth US\$72,075, were exported between March 1 and 8.

Border exports of fisheries products proceeded as usual in February, as the Chin Shwe Haw border gate was only closed briefly as a precaution against the virus outbreak but re-opened in March. However, the trade through the gate is mostly for eels, said Myanmar Fisheries Federation Vice Chair Daw Toe Nandar Tin. Up to February 28 of the current fiscal year, Myanmar fishery products worth US\$415.3 million were exported compared with US\$361.5 million in same period last year, mainly to China, according to trade figures from the Ministry of Commerce.

URL: <https://www.mmtimes.com/news/fisheries-exports-not-badly-hit-agriculture-virus.html>

Myanmar: Fish auction market to be established in Kawthoung

As the existing fish auction markets in Taninthayi Region are not successful, a new fish auction market will be built in the town of Kawthoung, said Min Lwin, president of Kawthoung District Fisheries Federation. The fish markets in Myeik and Thayetchaung in the region are not thriving, so local entrepreneurs will be trying to establish another fish auction market in Kawthoung. “I assure that we will start a fish auction market in Kawthoung. We will focus on auction marketing. There is an auction market in Thayetchaung. It is not successful. There is another auction market in Myeik. It is not thriving either. This may mean that entrepreneurs have no capacity. Entrepreneurs alone cannot do for the success of a market. It cannot be down only by government, parliament, a policy or a law. Cooperation of all is necessary. We need 60% participation of the government. I denounce any proposal coming to parliament in order to blame others, Min Lwin said. His remark targeted the proposal submitted by two members of the Upper House of Parliament.

The State Counsellor has already instructed the region government and Myanmar Investment Commission to successfully implement an international fish auction market project in Myeik. However, there have been delays in implementing the project. The project started 20 years ago. MIC approved US\$70 million in investment. US\$10 million has been invested, but the government has failed to hand over the remaining amount causing delays in the project, said auction market managing director Htay Htay Win.

URL: <https://elevenmyanmar.com/news/fish-auction-market-to-be-established-in-kawthoung>

Myanmar: More than 60% of mangroves has been deforested in last 20 Years

Mangroves account for only 0.7 per cent of the Earth’s tropical forest area, but they are among the world’s most productive and important ecosystems. They provide a wealth of ecological and socio-economic benefits, such as serving as nursery habitat for fish species, offering protection against coastal surges associated with storms and tsunamis, and storing carbon. While many countries have established legal protection for mangroves, their value for sustainable ecosystem services face strong competition from converting the land to other more lucrative uses, particularly for agriculture. In the past decade, studies have shown that mangrove deforestation rates are higher than the deforestation of inland terrestrial forests. New research from the

National University of Singapore (NUS) provided additional support for this, with results showing that mangroves deforestation rates in Myanmar, an important country for mangrove extent and biodiversity, greatly exceed previous estimates. The research, led by Associate Professor Edward Webb and Mr Jose Don De Alban from the Department of Biological Sciences at the NUS Faculty of Science, was published online in the journal *Environmental Research Letters*. Drastic mangrove deforestation Using satellite images and multiple analytical tools, the NUS team was able to assess the extent of mangrove in 1996. The researchers then followed the fate of every 30-metre x 30-metre mangrove image pixel for 2007 and 2016.

The team's estimates revealed that in 1996, Myanmar had substantially more mangroves than previously estimated. However, over the 20-year period, more than 60 per cent of all mangroves in Myanmar had been permanently or temporarily converted to other uses. These include the growing of rice, oil palm, and rubber, as well as for urbanisation. "Although fish and prawn farms accounted for only a minor amount of mangrove conversion, this may change in the near future. These competing land cover types are commercially important, but incompatible with mangrove persistence, said Mr De Alban. Urgent need for mangrove protection in Myanmar With the loss of nearly two-thirds of its mangroves, there is a need for the Myanmar government to develop holistic strategies to conserve this important habitat. This is particularly important as Myanmar strives to become more integrated into the regional and global markets for agriculture and aquaculture products. The fate of mangroves in the country will be tied to the strength of policies and implementation of conservation measures. Through proper long-term planning, management and conservation, this resilient ecosystem can recover and be maintained for the future, shared Assoc Prof Webb.

URL: <https://www.eurasiareview.com/04032020-more-than-60-of-myanmars-mangroves-has-been-deforested-in-last-20-years/>

Myanmar: Govt moves to regulate raft-fishing businesses

U Hla Kyaw, deputy minister of Agriculture, Livestock and Irrigation, said the operators of fishing rafts have to get permits from the government. "If the raft owners employ at least 30 people, they have to register their information, including their addresses, with the department to get a permit, he said. He blamed past violations on the labour shortage and weak law enforcement. Under the new regulations, he said, fishing raft operators may employ only workers who hold national registration cards and ensure that there is no forced labour. "There's a code of conduct to address weaknesses in these areas, U Hla Kyaw said. During a meeting with legislators, the operators agreed to a 16-point checklist to monitor the conduct of their businesses. The department said that businesses that fail to follow the rules face a fine of up to K3 million (US\$2000) and a three-month fishing ban. Last year, more than 100 people were reported killed, injured or missing on fishing rafts in Ayeyarwady Region. The business was thrust into the limelight late last year when a student at Dagon University was reported to have been trafficked and forced to work on a fishing raft before being rescued by his family.

URL: <https://www.mmtimes.com/news/government-moves-regulate-raft-fishing-businesses.html>

Myanmar: Fish in the streams are dying

he protesters called for the closure of the military-run Myaing Kalay cement factory, which is coal-powered and has been in operation for more than three decades. They said the factory has been expanding, and now produces 4000 tonnes of cement a day. It has destroyed the environment and their livelihoods, they said. Their top concern is the scarcity of clean water in the surrounding villages, which they attributed to the discharge from the factory, which contaminates streams and rivers and the underground water supply. A recent visit to the area showed black water in village wells. Some wells had clear water, but the villagers said they just use it for bathing and dare not drink it. Saw A Tee, a middle-aged man from the village, said he hadn't drunk the water since last year because he was afraid it was unsafe. People living in Nat Kone depend on the kindness of others for their drinking water. Unfortunately, donors have been hard to come by in the past few months, and they have had to buy drinking water. They have also begun using alum, a natural chemical compound, to clean the water in the wells for use on their farms or for taking a bath. Twenty-seven villages near the factory have discoloured water in their wells, which they blame the cement factory. Daw Khin Sein, 60, said she had lived all her life in Kaw Pa Tain, one of the contaminated villages, and this is the first time she has seen black water in her well. I want to know why the water has turned black and why we itch after taking a bath in it. With the summer months fast approaching, villagers living near the cement factory are desperately seeking help. The monsoon ended early this year, and the dry summer months begin soon. I don't think there will be enough water to plant rice this year, said U Nyunt She, who lives in Nat Kone. Asked why the problem only began recently, when the cement factory has been in operation since the 1980s, they said that the factory only began using coal power in 2018. Before that it used natural gas, one villager said. They also said that fish in the streams are dying. They said that when they found out that the factory would be shifting to coal power from natural gas they protested, but the authorities ignored them. Ko Saw Tha Phoe of the Karen Environmental and Social Action Network (KESAN) said the shift to coal was done without public consultation. But government officials and experts said the water in the villages near the cement factory is safe to drink. Last October 11, when the contamination was first noticed, Kayin Chief Minister Nan Khin Htwe Myint went to the area to assure the villagers that the water was safe to drink. To prove it, she drank some in front of the people. An local environmental group called Advancing Life and Regenerating Motherland, which operates an environmental laboratory, tested the discoloured water, collecting 10 samples in five villages where fish had died, and the water was black. The results showed that, except for a decline in the PH value of the water, it still met the drinking water standards set by the World Health Organization. The group said that high levels of chlorine and phosphate may have caused fish to die in the rivers and streams. But Ko Saw Tha Phoe remained unconvinced, and said his group would get a third opinion on the problem. We will invite international experts to provide an answer for local people, he said. He said that donating water to the villagers or digging new wells are only temporary solutions, not the long-term and sustainable solutions that are needed. We hope the government will help us find an answer to our concerns, he added. The water problem has also affected the livelihoods of the villagers. Nobody wants to buy food any more from noodle and other food shops in the villages, fishermen could not sell their catches, and farmers could not work their fields. We deserve better than this, Daw Soe Soe Aye said. We deserve clean water and air. At the moment, I feel very helpless.

URL: <https://www.mmtimes.com/news/kayin-villagers-blame-black-water-factory.html>

Myanmar continues dried fish exports to Bangladesh

Myanmar is continued to export many kinds of dried fish to Bangladesh through Maungdaw border trade center. It exported 210 tons of dried fish worth over US\$131,000 during January and it is the third largest export via Maungdaw border trade center. Myanmar exported 268 tons of dried fish worth about US\$192,000 in December, according to Office of the Director of Maungdaw border trade center. Myanmar earned over US\$1.4 million from export products including dried fish export during December and earned over US\$1.538 million in January. It exported onion, carp fish, dried fish, betel nuts, chick peas, ginger and plum jam and its main export is onions. Myanmar traded US\$6.707 million worth of products via Maungdaw border trade center from October 1 to February 14 and it is US\$3 million more in compared with the same period in last fiscal year.

URL: <https://elevenmyanmar.com/news/myanmar-continues-dried-fish-exports-to-bangladesh>

Rising sea levels put Myanmar's villages on frontline of climate change

Three years ago, the villagers watched as the Sittaung River on Myanmar's southeast coast crept closer to them, swollen by powerful tidal surges from the Gulf of Mottama that eroded its banks. Eventually, the 1,500 residents of Ta Dar U had to accept the inevitable: move or be washed away. Dismantling their wooden homes, they relocated several kilometres inland, away from the fertile fields they had cultivated for decades. "Where we now see water, our farming land used to be," said farmer Tint Khaing. "It was very big, nearly three hours' walking distance. We all lost our farmland to the sea." Ta Dar U is among hundreds of villages at the frontline of Myanmar's climate crisis, where extreme weather patterns and rising sea levels have amplified and accelerated natural erosion. Environmentalists consider Myanmar to be particularly vulnerable. It was among the top three countries affected by extreme weather between 1998 and 2018 on the Global Climate Risk Index, published by environmental think tank Germanwatch. Sea levels are projected to rise about 13 cm (5 inches) by 2020, putting at risk about 2.5 million coastal residents, said Myint Thein, a US-based groundwater consultant and member of Myanmar's natural water resources committee. "Flooding will be worst during the rainy season and high tide, dragging salty water up into the land," he said. Rapid erosion has already devoured 10 villages in the past four years, said Jos van der Zanden, chief technical adviser to the Gulf of Mottama Project, a Swiss-based organisation that provides assistance to displaced villagers. Fading future After their homes fell into the sea, the people of Ta Dar U, mostly rice farmers, scattered across the delta. Saltwater contaminated their lands and they were forced to take up new occupations, with little success. Nearly 200 students now travel hours every day to attend school after their own, which once stood near the town centre, was reduced to a crumbling pile of rubble on the riverbank. "If the erosion continues at this rate, the future of the students will fade as well," said Myo Min Thein, the sole teacher at a makeshift school, who said he is struggling to teach the 26 students, ages 4 to 14, by himself. Myanmar's climate change department has drafted plans to address rising waters but is not involved in resettling those displaced, deputy director Thin Thuzar Win told Reuters. An official from the disaster

management department said it did not have specific programmes for those displaced by riverbank erosion. Regional government officials did not respond to Reuters' requests for comment. Low-lying villages should be moved immediately to areas at least 7 metres (23 feet) above sea level, said Myint Thein. "It will be costly but it must be done," he said. "The environment has changed, so the people must learn to adapt." Reuters

URL: <https://www.tribuneindia.com/news/rising-sea-levels-put-myanmars-villages-on-frontline-of-climate-change-47991>

China has suspended crab imports from Myanmar for nearly two years due to the outbreak of COVID-19

Crab entrepreneurs in Labutta Township have called on the government to lift a ban on crab fishing in March as China has suspended crab imports from Myanmar for nearly two years due to the outbreak of COVID-19. Crab is one of Labutta's major exports to China. Due to the suspension of crab exports, all people working in the crab industry are out of work. The government always places a one-month ban on crab fishing in March every year. They called for the removal of ban in March in order that they can resume their works if the Chinese market reopens. U Win Naing, Chair of Labutta Crab Entrepreneurs Association: We send letters to the Fishery Department, MPs and General Administration Department. Now we can sell crabs only at local markets. Workers from the crab industry are working in the road construction in Yangon and Nay Pyi Taw and salt fields. The crab buying centers will have to find new workers as they are unable to come back to Labutta.

URL: <https://elevenmyanmar.com/news/entrepreneurs-call-for-removal-of-crab-fishing-ban-due-to-covid-19>

Survey finds decade-high numbers of dolphins in Myanmar

The number of the endangered Irrawaddy dolphins found in Myanmar this year has increased to 79, the highest in a decade, according to the Wildlife Conservation Society of Myanmar (WCS). The numbers include seven calves aged three months or younger. The Irrawaddy dolphins can also be found in the Mekong River in Cambodia and Laos, and in Mahakham River in Indonesia, according to WCS Myanmar. However, the dolphins in Myanmar have been on the brink of extinction, mostly due to electro-fishing. In Myanmar, the endangered species is renowned among researchers and fishing communities for their co-fishing partnerships. A traditional fishing method in the area sees dolphins work with fishing crews to round up shoals of fish and drive them towards nets. The phenomenon attracts increasing numbers of tourists to the Irrawaddy River. This is the highest number of the Irrawaddy dolphins found in the Irrawaddy River since 2010, said U Han Wine, who runs the Irrawaddy dolphins conservation team at the WCS Myanmar. The survey was carried out in early February along the Irrawaddy protection zone from Mandalay to Bhamo in Kachin State. The WCS and Department of Fisheries surveys estimated the number of dolphins between 2002 and 2005 at 29, when the conservation and protection plans began. The numbers varied from 58 to 70 in recent years. Last year, we counted 72, including four calves, said U Han Win, who is also an official at the Ministry of Agriculture, Livestock and Irrigation's Department of Fisheries. Since 2005, a protection zone

for the dolphins has been enforced along 370 km of the Irrawaddy between Mingun and Kyaukmyaung in Sagaing Region. In October 2018, another protected area spanning 100 km was introduced between Male and Shwe Gu townships. According to WCS surveys, the number of dolphins in the protection zone was fewer than 20 between 2007-09. The number increased by 2010 to 86. However, the number fell to 63 in 2014 and recovered to 76 by 2018. U Han Win said the increase showed conservation work and educational programs were on the right path. He added that there were still challenges ahead before the endangered label could be removed. We are on the right path, however, it is still hard to say when we can remove the endangered status as there are many challenges ahead, such as the use of electric shocks for fishing, poor water quality and food for the dolphins, he added. U Han Win said during the survey seven fishing boats which used battery-powered electric shocks to kill fish – the biggest threat to the dolphins – were seized along with toxic chemicals to kill fish. Since we can't patrol the river every day, fishing crews still use electricity to kill fish, which is illegal, despite education programs and the threat of punishment, said U Han Win. Electric-shock fishing will only disappear when fishermen follow the law. Currently, we are cooperating with the police for frequent patrols along the river to stop them, he said. The penalties for electro-fishing are three years in prison, a fine of up to 200,000 kyats (US\$138) and the confiscation of boats and equipment. U Han Win said the environment of the Irrawaddy River was improving but there was still limited food for the Irrawaddy dolphins. We still need to fight for better water quality. The use of pesticides and chemicals along the river poisons the dolphins directly or the fish they eat, U Han Win added. If the numbers of fish decline, it will threaten the dolphins too. We need more cooperation with other ministries, as well as residents, to save the river ecosystem to remove the endangered status and ensure the successful conservation of the Irrawaddy dolphins, he said.

URL: <https://www.irrawaddy.com/news/burma/survey-finds-decade-high-numbers-irrawaddy-dolphins.html>

Myanmar's Carp export to Bangladesh increases

Freshwater carps export to Bangladesh through Maungdaw border trade center is increased during January and it is became the second largest export product at Maungdaw border trade center, according to figures from Office of the Director of Maungdaw border trade. Myanmar is continued to export carps via Maungdaw border trade center. It exported 180 tons of carps in December 2019 and 224 tons of carps in January 2020. The export amounts of carps to Bangladesh are 319 tons in October 2019 and 224 tons in November 2019, according to figures from border trade export list. The largest export product is onion followed by carps export. At the present, onion, dried fish, betel nuts, chick peas and ginger along with carps are exported. The carp fish is carried from Yangon to Rakhine State with cold storage trucks to export from Sittwe and Maungdaw border trade centers. Myanmar exported US\$1.537 million worth of products to Bangladesh via Maungdaw border trade center during January.

URL: <https://elevenmyanmar.com/news/carp-export-to-bangladesh-increases>

Myanmar earns US\$340 M from fishery exports

Myanmar is earned over US\$340 million from fishery exports from October 1 to January 31 in this fiscal year and it is more US\$48 million in compared with the same period in last fiscal year, according to figures from Ministry of Commerce. At present, Myanmar is needed tenfold or more to reach the amount of fishery export made by neighbouring countries. The exporters need to advance their breeding techniques instead of fishing naturally, according to the fisheries department. Myanmar will cooperate with technicians from Indonesia, Taiwan and China to build fish food factories, cold-storage factories and modernized factories to earn US\$3 billion from fishery sector, said Htay Myint, Chairman of Myanmar Fisheries Federation. It can create 100,000 job opportunities and Ministry of Planning and Finance will give loans to buy land to build the factories and fish and prawns. The high priority sectors in 2020-25 national export strategy are farming products, food production, garment and textile, industry and electrical appliances, fishery, forestry products, digital products and services, logistics, quality control, trading, information services and entrepreneurial sectors.

URL: <https://elevenmyanmar.com/news/myanmar-earns-us340-m-from-fishery-exports>

Myanmar: Launched its second five-year National Export Strategy (NES) for the period between 2020 and 2025

Myanmar will take measures to ensure that overseas demand for locally made goods remains elevated even as cheaper imports from the region are expected to rise now that the country will participate further in the ASEAN Free Trade Area (AFTA). This should also keep the country's trade deficit, which was down to US\$627 million in fiscal 2019-20 from US\$5.2 billion in fiscal 2016-17, stable. Under AFTA, Myanmar is expected to substantially lower the import duties for a list of goods to as little as zero and no more than 5 percent. Custom duties will be nearly zero due to AFTA and ASEAN countries are already taking advantage of the opportunity to export more goods to Myanmar. We have in place the Import Protection Law to ensure local manufacturers are not threatened, said U Aung Htoo, deputy commerce minister. The Import Protection Law gives Myanmar the right to raise duties for a period of three years on imported goods that severely affect or threaten local manufacturer. The law also covers trade under AFTA, the Myanmar Times understands. Some traders have voiced their approval over the changing trade environment. Daw Yin Yin Moe, CEO of Hla Yin Moe, a textile and garment company, said that over the past five years her company was able to import industrial apparatus and machineries. With lower duties, it was easier to import more modern machineries to upgrade our operations, she said, adding that her factory now produces 100,000 pieces of clothing a month compared to 30,000 before the new machineries were brought in. On the other hand, Myanmar will also receive benefits from AFTA, as it will enjoy lower duties when exporting within ASEAN, U Aung Htoo said. To leverage on that environment, Myanmar has launched its second five-year National Export Strategy (NES) for the period between 2020 and 2025. Under the second NES, six sectors – gems and jewellery, agriculture-based food products, textiles and garments, machinery and electrical equipment, fisheries and forestry and digital -have been added on as priority sectors. Five other support services sectors – digital products, logistics, quality control, trade information and innovation and entrepreneurship – will also be implemented under a framework to be set up within the next five years, said U Aung Htoo. U Aung Soe, director general for the Department of Trade Promotion, said more still needs to be done to improve manufacturing and raise exports in the private sector. Mass manufacturing is the

lifeblood for exports and local factories and the private sector's operational skills, technology and cooperation needs to improve to support this. In the next five years, we will make action plans for exporters and make arrangements to cooperate, especially on the financing, he said. He added that for exports to continue rising, production levels need to be scaled up. For that to be possible, better logistics and infrastructure is needed. If there are no roads, no cars or no warehouses to carry and store the produce from the farms, production will be affected and prices will be high. That will impact our competitiveness. The logistics issue must be solved, he said. Meanwhile, U Aung Htoo said more efforts must be taken to channel Myanmar's main agricultural exports into the region, as the bulk of rice, beans, corn and sugar is now exported to China and India. He added that the government must invest more in providing sufficient electricity and financing to manufacturers while ensuring that the trade policy flaws of NES 2015-2019 are not repeated in the next five years.

URL: <https://www.mmtimes.com/news/myanmar-takes-steps-improve-trade-strategies.html>

Myanmar: Thousands of workers left jobless after suspension of crab exports to China

Thousands of workers from crab wholesale centres from the Labutta township are now out of their jobs after China suspended its crab imports from Myanmar due to the spread of novel coronavirus in China. The suspension of crab exports to China has huge impacts on workers and the crab industry in the township. Crab is one of the major exports of Labutta Township, and it may have an impact on those involved in the whole industry. The price of crab declined to around Ks5,000 (RM14) per kilo from around Ks15,000 (RM43) per kilo after China stopped importing crabs from Myanmar. U Win Naing, Chair of the Labutta Crab Entrepreneurs Association said: Due to the closure of border gates, we cannot ship crabs to China. We mainly export crabs to China. There are 130 crab wholesale centres in Labutta. Labutta township exports more than ten tonnes of crabs to China every day. Most people in the rural areas rely only on crab fishing. – Eleven Media Group/Asia News Network

URL: <https://www.thestar.com.my/news/regional/2020/02/08/thousands-of-myanmar-workers-left-jobless-after-suspension-of-crab-exports-to-china>

Myanmar: Illegal fishery and fishing raft operations result in human trafficking, says Dr. Aung Naing Oo

Illegal fishing industries and fishing rafts are the leading causes of human trafficking in Ye Township. Dr. Aung Naing Oo, the parliamentary representative for Chaungzone Township Constituency (1) during a presentation at the Mon State Hluttaw 15th regular session held yesterday. I want to point out that human trafficking, and [other] criminal activities are occurring in the illegal fishing boats, fishing blocks, and fishing rafts [sector]. These are the root causes of human rights violations, said Dr. Aung Naing Oo. In July 2019, MNA reported on the rise of human trafficking on the east coast of Myanmar. Brokers' from the fishing industry take advantage of fisher folk in the off season, typically forcing these individuals to work on fishing rafts or other projects by force including threatening the workers that if they don't work, they will be thrown off the fishing rafts and into the sea. According to the Anti-Trafficking in Persons Law of Myanmar established in 2005, human trafficking is defined as the recruitment, transfer,

hiring, sale, purchase, lending, harboring or receipt of a person after committing acts of exploitation of a person with or without his consent. Dr. Aung Naing, Oo, stressed the need to take serious action against these activities. Since the beginning of last year, there have been over 400 legal fishing industries in Ye township. Earlier this year, we have observed a rapid increase in the number of [fishery operations] it has now reached 1000, he added. Due to the weakness of respective departments, and the lack of practical oversight, illegal fishing boats have been on the rise year after year, and that makes legal fisheries owners suffer a lot, U Chit Thin, need to identify who and where U Chit Thin is what agency? added. There are 14 fishing blocks in Ye Township, and more than 400 unlicensed fisheries have been investigated. According to the Ye Township Fishery Department 2018-19 records, there are 387 inshore fishing boats, 195 offshore fishing boats, and over 1000 fishing rafts. The respective department also issued a work permit to 4,500 fishermen.

URL: <https://www.bnionline.net/en/news/illegal-fishery-and-fishing-raft-operations-result-human-trafficking-says-dr-aung-naing-oo>

Myanmar: Gender Equality in Myanmar: The SDGs Way

The urgency and the concerted effort to bridge gender gaps in Myanmar society and contextualization of indicators was exhorted at a policy roundtable – SDGs and Gender Equality: Prioritizing action for the next decade organized jointly by the Centre for Economic and Social Development (CESD) and International Development Research Centre (IDRC) Canada, in Yangon this week. As part of knowledge for Democracy initiative, this policy round table has brought together researchers and practitioners, taking stock of the existing research evidence vis-a-vis gender gaps at global, south Asian region and Myanmar levels and ways to address the same. Presenting a broader overview, gender expert, Prof. Debapriya Bhattacharya of Centre for Policy Dialogue (CPD) Dhaka emphasized the paramount need for State (government) intervention in promoting women’s rights in terms of justice, politics and service delivery. While markets have a role in terms of economic empowerment, labour and credit supply they need government’s policy in terms of a supporting environment. Finally, at the micro-level, society has an important role in terms of altering attitudes and behaviour (of men and women) that can promote women’s rights and gender equality. Global progress card on SDG – social development goals – vis a vis gender equality points to mixed progress. Evidence points out that women’s political representation at the micro-level appears to be far more effective in changing gender relationships than at higher levels. Addressing issues like child marriage, violence against women, at the local level by public representatives at the local level is found to be effective in South Asian countries like India and Bangladesh. Another important insight from the global evidence is the absence of a relationship between per capita income and gender gap index. Evidence points out that achievements in the arena of gender equality need not follow a rise in per capita income, rather countries can achieve gender equality even when they are at a low per capita income level. This is significant as Myanmar can aspire and achieve gender equality through effective public policies that work for women. Globally the education gender gap is improving, health is also improving however transformative gender indicators like attitudes and behaviour are yet to see improvements, which would mean more work at the societal level. A priority focus for the coming years would be to acknowledge and account women’s unpaid care

work; addressing violence against women and addressing issues from the perspective of disaggregated way, accommodating diverse intersectionality related to women's disadvantages. For Myanmar, more data and evidence is needed to understand the situation and devise policies and programmes. MSDP is one such route. At a practical level, the need for disaggregated data, monitoring gender-focused indicators, gender budget and allocative priorities and gender-sensitive results framework are to be practised by Myanmar in order to reach SDG goals. Daw Ngu Wah Win presented findings of the recent research conducted by CESD, which was based on a labour force survey, SME survey and education survey. It points out that labour force participation is improving in central regions of Myanmar while states and remote regions such as Tanintharyi are lagging behind. Gender division of labour and traditional roles for women constrain labour market opportunities for women. Typically, female labour is more in numbers in sectors like education, health and social services, garments and financial sectors while male labour is more in transport, fisheries and construction sectors. There seems to be a gender balance in terms of employment in agriculture, manufacturing and food processing sectors. More importantly, the study points out a gender wage gap exists in both urban and rural labour markets, but it is more pronounced in rural labour markets. While in urban areas average daily wage for a male is 4658 Kyats, the same for a female worker is 3889 Kyats. In rural areas, men earn on an average 3827 Kyats, while women earn 2990 Kyats. Similar levels of wage disparity can be seen throughout the country, across all states and regions. It can also be seen across all sectors of employment. While there is a popular perception that women's entrepreneurship is seen favourably in Myanmar in terms of their overwhelming presence in urban informal trading activities, evidence points out there are fewer women at the top management levels of firms of all sizes and all industrial sectors. This situation is available, in spite of the fact that over 70% of graduates and post-graduates of Yangon University are women. The evidence marshalled by CESD on the glass ceiling in the education sector provides a compelling case for deliberative public policies that would remove constraints for women to move upward, to decision-making levels, in the education sector. While 90% of teachers in basic education level are women, over 39% of all headmasters of basic education schools are men. All nine director generals of the ministry of education are men. Over 80% of faculty members of higher education institutions are women, while men occupy overwhelmingly at decision making positions. There could perhaps be various reasons including deep-seated attitudes, gender norms, and practical difficulties for women to move upward in the ladder of professional growth. Another set of data presented was from the World Economic Forum (WEF). Its gender gap rank shows that Myanmar has fallen back in 2020 compared to 2017. Myanmar women have fallen behind in terms of economic participation and opportunity suggesting that women workers and entrepreneurs faced great challenges in terms of work participation and running businesses over the past few years. Lower participation in terms of women leaders as ministers is also found over the past three years, though there is an increase in the number of women parliament members. Further, women's issues appear to form a lower priority compared to other priorities of the country. Following these presentations, a lively panel discussion moderated by Dr Zaw Oo of CESD with stakeholders viz., researchers, activists and private sector representatives identified the challenges of achieving gender equality in different sectors and how the government can support the agenda. The panellists included Daw Pansy Tun Thein from GEN, Daw Thawdar Aye Lei from EmRef, Daw May Nyo Lwin from MWEA, Dr Rebecca Htin from Karen Humanitarian Network, Daw Phyo Sandar Soe from CTUM and Dr Yin Yin Nwe, former UNICEF country representative to China. The issues brought out by the panellists included the need for capacity

building of women in terms of leadership, skills and capacities for participation in political and economic fronts. Traditional beliefs need to be changed which require significant work with men, women, boys and girls to see gender roles and gender division of labour, from a new perspective. Issues like peace and security can be achieved through greater women's participation which is currently limited to addressing local level issues of conflict management as most often men remain outside villages in conflict situations. Decision-making roles remain with men. Gender inequality can be seen at the institutional level at workplaces, employers associations and trade unions as well. Women entrepreneurs and leaders face several difficulties due to care responsibilities. Gender norms also prevail in political parties and women's participation remains limited due to attitudes of the leadership. The unfinished agenda of gender equality needs a concerted effort by all stakeholders and anchoring programmes and policies around SDGs is identified as an approach to be followed by Myanmar. Identification of indicators, localisation and contextualization of goals, gender-based budgeting and monitoring are some of the practical solutions identified by the panellists in order to realize gender goals of SDGs.

URL: <http://mizzima.com/article/gender-equality-myanmar-sdgs-way>

Myanmar: Fish in the streams are dying

The protesters called for the closure of the military-run Myaing Kalay cement factory, which is coal-powered and has been in operation for more than three decades. They said the factory has been expanding, and now produces 4000 tonnes of cement a day. It has destroyed the environment and their livelihoods, they said. Their top concern is the scarcity of clean water in the surrounding villages, which they attributed to the discharge from the factory, which contaminates streams and rivers and the underground water supply. A recent visit to the area showed black water in village wells. Some wells had clear water, but the villagers said they just use it for bathing and dare not drink it. Saw A Tee, a middle-aged man from the village, said he hadn't drunk the water since last year because he was afraid it was unsafe. People living in Nat Kone depend on the kindness of others for their drinking water. Unfortunately, donors have been hard to come by in the past few months, and they have had to buy drinking water. They have also begun using alum, a natural chemical compound, to clean the water in the wells for use on their farms or for taking a bath. Twenty-seven villages near the factory have discoloured water in their wells, which they blame the cement factory. Daw Khin Sein, 60, said she had lived all her life in Kaw Pa Tain, one of the contaminated villages, and this is the first time she has seen black water in her well. I want to know why the water has turned black and why we itch after taking a bath in it. With the summer months fast approaching, villagers living near the cement factory are desperately seeking help. The monsoon ended early this year, and the dry summer months begin soon. I don't think there will be enough water to plant rice this year, said U Nyunt She, who lives in Nat Kone. Asked why the problem only began recently, when the cement factory has been in operation since the 1980s, they said that the factory only began using coal power in 2018. Before that it used natural gas, one villager said. They also said that fish in the streams are dying. They said that when they found out that the factory would be shifting to coal power from natural gas they protested, but the authorities ignored them. Ko Saw Tha Phoe of the Karen Environmental and Social Action Network (KESAN) said the shift to coal was done without public consultation. But government officials and experts said the water in the villages near the

cement factory is safe to drink. Last October 11, when the contamination was first noticed, Kayin Chief Minister Nan Khin Htwe Myint went to the area to assure the villagers that the water was safe to drink. To prove it, she drank some in front of the people. An local environmental group called Advancing Life and Regenerating Motherland, which operates an environmental laboratory, tested the discoloured water, collecting 10 samples in five villages where fish had died, and the water was black. The results showed that, except for a decline in the PH value of the water, it still met the drinking water standards set by the World Health Organization. The group said that high levels of chlorine and phosphate may have caused fish to die in the rivers and streams. But Ko Saw Tha Phoe remained unconvinced, and said his group would get a third opinion on the problem. We will invite international experts to provide an answer for local people, he said. He said that donating water to the villagers or digging new wells are only temporary solutions, not the long-term and sustainable solutions that are needed. We hope the government will help us find an answer to our concerns, he added. The water problem has also affected the livelihoods of the villagers. Nobody wants to buy food any more from noodle and other food shops in the villages, fishermen could not sell their catches, and farmers could not work their fields. We deserve better than this, Daw Soe Soe Aye said. We deserve clean water and air. At the moment, I feel very helpless.

URL: <https://www.mmtimes.com/news/kayin-villagers-blame-black-water-factory.html>

Myanmar: Local communities are worried about the risks of losing their livelihoods

China and Myanmar agreed to accelerate several joint infrastructure deals and projects during President Xi Jinping's historic visit to the country, giving new impetus to commercial relations that have revived under Myanmar leader Aung San Suu Kyi. Xi visited Myanmar on January 17 and 18, marking the first time a Chinese leader traveled to the Southeast Asian country in nearly two decades and coinciding with the 70th anniversary of the two sides establishing formal diplomatic relations. The two governments inked 33 agreements involving key infrastructure projects while agreeing to accelerate the implementation of the China-Myanmar Economic Corridor scheme, part of Beijing's Belt and Road Initiative (BRI). Most significantly, the two sides agreed to concession and shareholder agreements for the China-backed port project at Kyaukphyu in central Rakhine state. There are five agreements still to be signed on the project, according to Myanmar Deputy Commerce Minister Aung Htoo. The deals are controversial, however, and could expose China to future political risks. Tun Kyi, coordinator of the community group Kyaukphyu Rural Development Association, said local villagers were not consulted during the negotiations of the two new agreements. Right now the majority of the people in the project area do not support the project. The company side did not disclose or consult the project details to the public, he told Asia Times. Local communities are worried about the risks of losing their livelihoods without being provided alternative jobs, especially because most residents are involved in fisheries, as well as sand and gravel mining, he added. A consortium led by state firm CITIC, comprised of four other Chinese firms and Thailand's Charoen Pokphand Group, plans to develop the deep-sea port as part of a special economic zone in the restive state of Rakhine. In late 2019, CITIC hired Canadian firm Hatch as project manager to supervise and recruit consultants for a legally required environmental and social impact assessment. Kyaukphyu is the site of twin pipelines through which oil produced in Myanmar is delivered and exported to China. The port is just one of the dozens of deals signed

during Xi's two-day visit, although no major new projects were announced. At the same time, few concrete contracts were signed. Newly inked agreements aimed to hasten negotiations on the proposed Ruli-Muse Cross Border Economic Cooperation Zone and a 1,390 megawatt, US\$2.6 billion liquified natural gas (LNG) power plant project in Ayeyarwaddy's Mee Laung Gyaing. China's ambitious railway scheme to link southwestern China to the Indian Ocean moved ahead with a formally submitted Muse-Mandalay Railway Feasibility Study Report. A letter of intent was also signed for the Yangon New City project, led by Yangon Chief Minister Phyo Min Thein and Myanmar tycoon Serge Pun. Whether all the projects will proceed smoothly is questionable, analysts say. Hunter Marston, a doctoral candidate at the Australian National University, highlighted that many of the projects are enormously complex in detail, financing and development timelines. Even this weekend's meeting didn't iron out all of the details [for Kyaukphyu port], reportedly avoiding specific agreements related to financing and bidding which will come later, he said. The omission of any mention of the Myitsone dam, a \$3.6 billion China-funded mega-dam project suspended by Myanmar in 2011, was noteworthy. The dam remains highly controversial in Myanmar, in part because 90% of the generated power would be exported across the border to China. On the day of Xi's arrival in Myanmar, a group of more than 30 local civil society organizations, mostly based in Kachin state, released a public letter urging the Chinese leader to terminate the scheme. It now seems clear that Xi Jinping, while personally invested in the project, understands Aung San Suu Kyi's constraints in an election year and appears content to wait until after November elections before pressuring her government to resume the project, Marston commented. When meeting the Chinese leader, Suu Kyi praised her neighbor's role in the world but urged for economic projects that avoid environmental degradation and bring benefits to local communities. The Chinese do not have a reputation for responsible investments. Rather, they are a reliable source of massive economic investment: quick, direct, and with few conditions attached, Marston noted. Bilateral relations have nonetheless warmed significantly since then-president Thein Sein halted Myitsone on environmental concerns. Despite Myanmar's opening up since decades of reclusive military rule, China remains by far the biggest source of foreign direct investment (FDI) in the country. Beijing is also a key stakeholder in Myanmar's fractured peace process and its staunch supporter in the UN, where Myanmar has come under fire for its treatment of minority Rohingya Muslims in Rakhine state. But as China pours billions of dollars of new investment into its smaller, less-developed neighbor, it will find that the country's laws, scrutiny and public expectations of investors have all drastically changed since 2011. For example, the landmark Investment Law enacted under Suu Kyi's government explicitly requires responsible investment and a greater level of disclosure. The 2012 Environmental Conservation Law, meanwhile, creates legal liability for all investors to provide compensation for any negative impacts caused by their projects. The 2015 Environmental Impact Assessment Procedure also puts in place a mechanism to regulate negative impacts of business investment. The Investment law also stipulates that for investment businesses which may have a significant impact on security, economic condition, the environment, and national interest, the government should seek approval of the Pyidaungsu Hluttaw, the national legislature, before signing the deal. This should cover Kyaukphyu, Myitsone and other mega-projects, but to date the Suu Kyi administration has not implemented the checking and balancing clause in the law. One of the most important tasks for the Chinese investors is to consider the environmental, social and governance risks of projects at the early, concept, stage, and take steps to reduce negative impacts, said Vicky Bowman of the Yangon-based Myanmar Centre for Responsible Business. Does designing a new city to withstand only

a 90 centimeters sea level rise make economic sense for Myanmar or the investors at a time when many coastal cities in Asia are moving in land or investing heavily in flood defences? she said, referring to the Yangon New City project. She emphasized the need for an honest assessment of whether the project makes sense in a climate changed affected world where sea level rise projections range from 68-200 centimeters by 2100. Central to all of these good practices is transparency, not just with project-affected people, but the wider Myanmar public so that stakeholders understand and can influence the investments to make them more successful, Bowman told Asia Times.

URL: <https://www.asiatimes.com/2020/01/article/china-myanmar-tighten-their-belt-and-road-ties/>

Myanmar: The abuse behind Myanmar's fish paste industry

A DEJECTED Daw Myint Myint San was sitting in the small room of the labour office in Ayeyarwady Region's Pyapon Township, nodding as if she understood what the labour officer was saying. The labour officer, a woman, was brandishing a book of labour law regulations and speaking loudly. It clearly states in the 1923 law that you cannot get compensation unless you have a death certificate, the labour officer said. How can I believe your husband is dead unless you can produce the death certificate? But officer, my husband died at sea and his body has not been found, Myint Myint San replied. How can I show you a death certificate? Her husband, U Zaw Oo, left their home in Kweh Lweh Yo Seit village in Ayeyarwady's Myaungmya Township last August to work on one of the fishing rafts off Pyapon, which are notorious for labour abuses. In October, Myint Myint San received a phone call from her husband's employer to say he had drowned while trying to escape from the raft. Asked where her husband died, Myint Myint San points to the big distributary of the Ayeyarwady River that flows through Pyapon on its way to the sea. The employer offered Myint Myint San K600,000 (US\$402) in compensation for the death of her husband. Thinking the amount too small, she complained to the labour office in Pyapon. However, under the 1923 Workmen's Compensation Act, which was amended in 2005, Myint Myint San is entitled to receive compensation of only between K150,000 and K450,000 from the employer for the death of her husband if she has a death certificate. If her husband had paid into a social security fund, she might expect a higher amount, but it's unlikely that any workers on the rafts have such protection. Myint Myint San had no choice but to accept the K600,000. I've been deprived of a husband, but they have only given me K600,000, she said.

How can I manage with three children? As Myint Myint San left the labour office, she cursed the kyar phaung (tile rafts), the bamboo fishing rafts launched from Pyapon, which are named after the tile nets that workers cast from their sides to catch fish. Trafficked, tortured, released Pyapon takes its name from a Mon term for a row of restaurants. Under the Mon kings, who ruled over lower Myanmar before being conquered by the Bamar Konbaung dynasty in the 18th century, Pyapon had the best restaurants in the delta because of its position near the coast in an area where fish and prawns were abundant. The town has also long been famous for the quality of its fish paste, called ngapi, the pungent, salty condiment that is integral to a Myanmar meal. Some consider Pyapon ngapi to be the country's best. The Myanmar Fisheries Federation says Pyapon Township produces 80 percent of the ngapi and dried prawns consumed throughout the country. This huge demand is satisfied by the fishing rafts moored off Pyapon. The bamboo rafts are about 100 square feet, or nine square metres, and a crude shelter with a stove sits on the

lower of two decks. They are towed as far as 100 kilometres out to sea, where they are anchored. Each raft is manned by up to four workers, including a supervisor. Fish and prawns caught in nets are boiled before being sun-dried on the top deck of the raft. The fish and prawns are collected from the raft every three to five days by a boat that also delivers water, rice and vegetables to the raft crew. The rafts are anchored in position for the duration of the catching season, which lasts from September to April, before the arrival of the monsoon, and the crew is expected to live on the raft for the whole eight months. Anyone who leaves before the season ends has to return all their pay. The notoriously brutal working conditions on the kyar phaung, out to sea and far from view, have been under scrutiny since a 20-year-old university student was trafficked onto a raft. Ko Myat Thura Htun, a history major at Yangon's Dagon University, was abducted by brokers, as traffickers are called, on October 2 and sold for K700,000 to work on a fishing raft. He toiled on the raft for about 45 days before being released when his family reportedly paid K700,000 to the raft owner. On leaving the raft, Myat Thura Htun displayed injuries consistent with having been tortured. Part of an ear had been cut off, his arm was broken and there were bruises and cuts all over his body. The Myanmar Police Force's Anti-Human Trafficking Task Force was preparing to file charges against two people – a broker, Ba La Gyi, and a raft supervisor, U Kyaw Aung – over the trafficking of Myat Thura Htun, who was reportedly targeted for physical abuse on the raft because he was a slow worker. However, Kyaw Aung died in detention in mid December, police say because of a stroke. The case against Ba La Gyi under the 2005 Anti-Trafficking in Persons Law had not gone to court at press time. ATTF spokesperson Major Khin Mg Kywe told Frontier on December 24 that of 200 reported human trafficking cases in 2019, 19 related to offshore fishing rafts, which only operate off Ayeyarwady and Tanintharyi regions. All but two of these cases were in Pyapon. However, fishing rafts continue to operate unregulated and largely beyond the reach of law enforcement. Khin Mg Kywe said anti human trafficking police only responded on receiving reports with exact information. The case of Myat Thura Htun, which was widely reported in the media, moved the Myanmar National Human Rights Commission to action and a team under commissioner U Yu Lwin Aung travelled to Pyapon on December 2 for the purpose of inspecting the rafts. The visit was a fiasco. Rough weather meant they needed a larger boat than any of the available vessels to travel to the rafts out at sea, and the team left Pyapon on December 6 after interviewing raft owners, supervisors and workers in the villages on the shore. Yu Lwin Aung told Frontier on December that he wanted to make a return trip to visit the rafts. He did not say when this might happen, or when the commission's report and recommendations would be published. Out of sight

We are legal enterprises, but I admit there are illegal things happening, U Than Chaung, chairman of the Pyapon Township Kyar Phaung Fishery Enterprises Association, told Frontier in an interview in his office. Than Chaung once operated fishing rafts, but for the past 20 years has served as chair of the association. Than Chaung says there are about 120 raft operators at Pyapon, who own about 1,000 rafts, and the industry employs about 10,000 workers, including about 4,000 who work offshore. The fishing raft industry at Pyapon Township operates out of three villages on the coast about 50 kilometres from Pyapon town. They include Daw Nyein village, where most local residents now refuse to work on the rafts because they do not want to live out at sea on the flimsy structures for eight months a year. It's exhausting work; we laboured day and night and got only a few hours' sleep, said U Myint Tin, a resident of Daw Nyein village who worked on the rafts for seven years before stopping in 2016, and now fishes from his own boat. When you get off the raft, your complexion is as black as a buffalo. Because of an acute labour shortage, raft owners rely on brokers to recruit workers, most of

whom are not trafficked. Each September, these brokers bring truckloads of migrant workers to Daw Nyein village and introduce them to raft owners. The labour shortage also means that the employers never screen the workers. They might include criminals who have committed murder, or escaped inmates, said Than Chaung, adding that the overwhelming majority do not have identity documents. For the workers, the biggest attraction of toil on the rafts is being paid in advance. Depending on their skill, they can expect a lump sum of between K700,000 and K800,000, but they must sign a pledge to return the money if they leave the raft for any reason before the end of the eight-month fishing season. The workers are interested in working on the rafts because we pay them a big sum in advance. If we do not pay them in advance, they will not do this work, said U Htay Oo, a fishing raft owner at Daw Nyein village. The Department of Fisheries forbids any one owner or company from operating more than eight fishing rafts. However, the regulation is flaunted by most raft operators, some of whom own up to 50 rafts.

No one complies with this rule because the government never conducts inspections or takes action against those who do not comply, said Than Chaung. Wealthy fishing raft owners live in Pyapon town or next to warehouses in villages where the catch is unloaded and sorted. They hire well-built men known as oo zee gyoke who play the role of enforcers and travel back and forth on boats to inspect work on the fishing rafts and collect their catch. The oo zee gyoke are paid a percentage of the value of the catch, which gives them an incentive to push the workers hard.

A bad oo zee gyoke beats workers who don't do what he asks them to, said U Myint Tin, 50, a former raft worker who lives in Daw Nyein village. Sometimes the workers are beaten so badly they are crippled for life; at other times they are beaten to death and their bodies dumped in the sea. Sometimes the workers on the raft fight amongst themselves, Than Chaung said. Fights at sea are unavoidable. A small government hospital at Daw Nyein village recorded 102 raft worker deaths at sea in 2017, 82 in 2018 and 80 this year to end of November. However, the hospital superintendent Dr Min Nyan Paing Aung said they only count people whose bodies are returned to shore and not those whose bodies are dumped at sea. Because the rafts are generally beyond mobile phone reception, when a worker is injured or supplies run out, the crew unfurls a white flag from the centre of the raft to alert an oo zee gyoke. When a crew member dies, the survivors place the flag at the head of the raft. The smell of ngapi When Frontier visited Daw Nyein and the nearby village of Khabyat in December, the air was filled with the pungent odour of ngapi and dried fish. The area bustles with brokers during September when the season begins, said Daw Nyein resident Daw Maw Maw San. There are good businessmen and there are bad businessmen, and it is because of the bad businessmen that this business is notorious, she told Frontier. The raft owners have many warehouses in the village, where dried fish and prawns are cleaned before being packed and transported to the huge Bayintnaung agricultural commodities market in Yangon's Mayangone Township. We worry about workers dying on the rafts because it means we lose part of our workforce and have to pay compensation as well, said U Bo Myint Than, who owns 80 rafts. The raft owners say they need to exercise close control over the workers to ensure they do not flee after taking their advance payment. It was also not unknown for workers to pretend to go missing at sea so their families could claim compensation, they say.

Not everyone exploits and bullies the workers; there are also honest businessmen, said Bo Myint Than. After media scrutiny of the industry intensified thanks to the case of the trafficked student, the Myanmar Fisheries Federation held a news conference in Yangon on November 26. At the event, MFF secretary U Win Kyaing urged the media not to report misinformation about labour abuses at Pyapon because it could harm the ngapi and dried fish business. Despite the importance of Pyapon in supplying the national market for ngapi and dried fish, the Pyapon

Township fishery department was unable to provide Frontier with the production figures. This is partly because raft owners do not complete goods movement documents as required by fishery department regulations. U Soe Win Naing, chairman of the Association of Fish Paste, Dried Fish and Fish Sauce Entrepreneurs, told Frontier there were 12 sales centres at Bayintnaung market that each day receive up to 2,000 bags of ngapi, each weighing about 80 kilogrammes. There is no part of the country that does not buy ngapi, Soe Win Naing told Frontier. You can say that ngapi is political because if the cost of ngapi goes up, people throughout the country will complain, he said. If the fishing rafts off Pyapon were made to operate according to the law the ngapi business would suffer, Soe Win Naing said, describing a difficult trade-off between humane labour standards and a viable industry offering cheap food for the nation's poor. There are illegal methods of mobilising workers and recruiting them in the fishing raft business and if they are stopped, the production of ngapi will surely be affected, he said. But if action was taken against the illegal practices, we would be able to eat ngapi with a clear conscience.

URL: <https://frontiermyanmar.net/en/the-abuse-behind-myanmars-fish-paste-industry>

Myanmar: Immediate termination of fish-cum-poultry farming impacts dependents and food self-sufficiency

The immediate termination of fish-cum-poultry farming may have an impact on those relying on farming, investments and the food self-sufficiency of the country and the public, according to Myanmar Livestock Federation. Currently, there are 211 entrepreneurs, 6,330 staff and workers and 31,650 dependent families. Dr. Kyaw Htin, Vice-President of Myanmar Livestock Federation submitted a report to the Private Sector Development Committee led by Vice-President U Myint Swe. The fish-cum-poultry farming is employs 37,980 people. The industry has 1,350,000 meat chickens, 2,901,900 egg chickens and 1,465,500 semi broiler chickens. The industry is supporting the country's meat sector by producing meat and eggs at reasonable prices. Dr. Kyaw Htin suggested that the authorities should gradually change the system through the systematic survey on the impacts that have on consumers, production of high-quality fish strains, changes to the breeding system and the market exploration. Local poultry farming increases by 15 per cent annually. The spreads of severe bird flu including other infectious diseases pose a threat to local poultry farmers every year. They face many challenges, according to the Livestock and Veterinary Department. The local poultry farming sector sees development and the consumption of chicken eggs and meats becomes high. The sector is relatively low compared with the neighbouring countries. The spread of disease is the biggest threat to the development of poultry sector. The poultry sector faces other infectious diseases including severe bird flu every year. On the other hand, the sector cannot be provided with sufficient screening yet. U Tint Oo, a poultry farm owner from Bago Region said: The deaths and culling of chickens due to the spread of bird flu in 2016, cost the poultry farming millions of dollars. The price of chicken meat went down to 50-80 per cent in the market. Due to the shortfall of chicken meat caused by the culling of chickens in the poultry farms, the price of chicken increased by 60 per cent. From 2003 to 2019, there were 860 bird flu cases in 16 countries, resulting in 454 deaths, according to the WHO.

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Myanmar: Marine export earnings increase by 34 million dollars

During three months of this fiscal year, the marine export earnings exceeded 250 million US dollars, up over 34 million US dollars compared with the same period last year, according to the Commerce Ministry. Till December 27 of this FY, the total marine export earnings hit 252.948 million US dollars, up 23.720 million US dollars compared with the last years' figure of 218.228 million US dollars. According to the Fishery Department, Myanmar's marine exports are relatively low compared with those in neighbouring countries. In a bid to increase the marine export volume, the fishery sector should place more emphasis on a better breeding system rather than natural fishing. At the 16th regular meeting between the Vice-President-1 and local entrepreneurs in May 2018, U Htay Myint, Chair of Myanmar Fishery Federation said in order to produce the fish products worth up to three billion US dollars, Myanmar would build modern fishing lakes, fish feed factories, cold storage factories and value-added processing plants, in cooperation with experts from Indonesia, Taiwan, and China. The project can employ around 100,000 people in Myanmar. As entrepreneurs are in need of fish and prawn strains, land and SME loans, the Ministry of Planning and Finance has a plan to grant loans for the project.

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