

Eskaleran Pulan Chamorro *Refaluwasch Pápáál Maram*

JANUARY 13, 2024–JANUARY 30, 2025



*Western Pacific Regional
Fishery Management Council*

wpcouncil.org

New Year, Sustainable Start

Begin the year in the CNMI with a commitment to sustainable fishing practices. Throughout the year, anglers of all kinds eagerly anticipate various events, including the annual Saipan Fishermen's Association's International Fishing Tournament in July, I Sanhalom Laguna Anglers Association's Mafuti Derby in August, Bisita Luta Fishing Derby in September, Tinian's Taga Festival Derby in October, and several others in between. Community organizations like Tasi To Table conduct high school outreach programs and fishing events, while the Talaya Club offers *talaya* (throw net) lessons year-round.

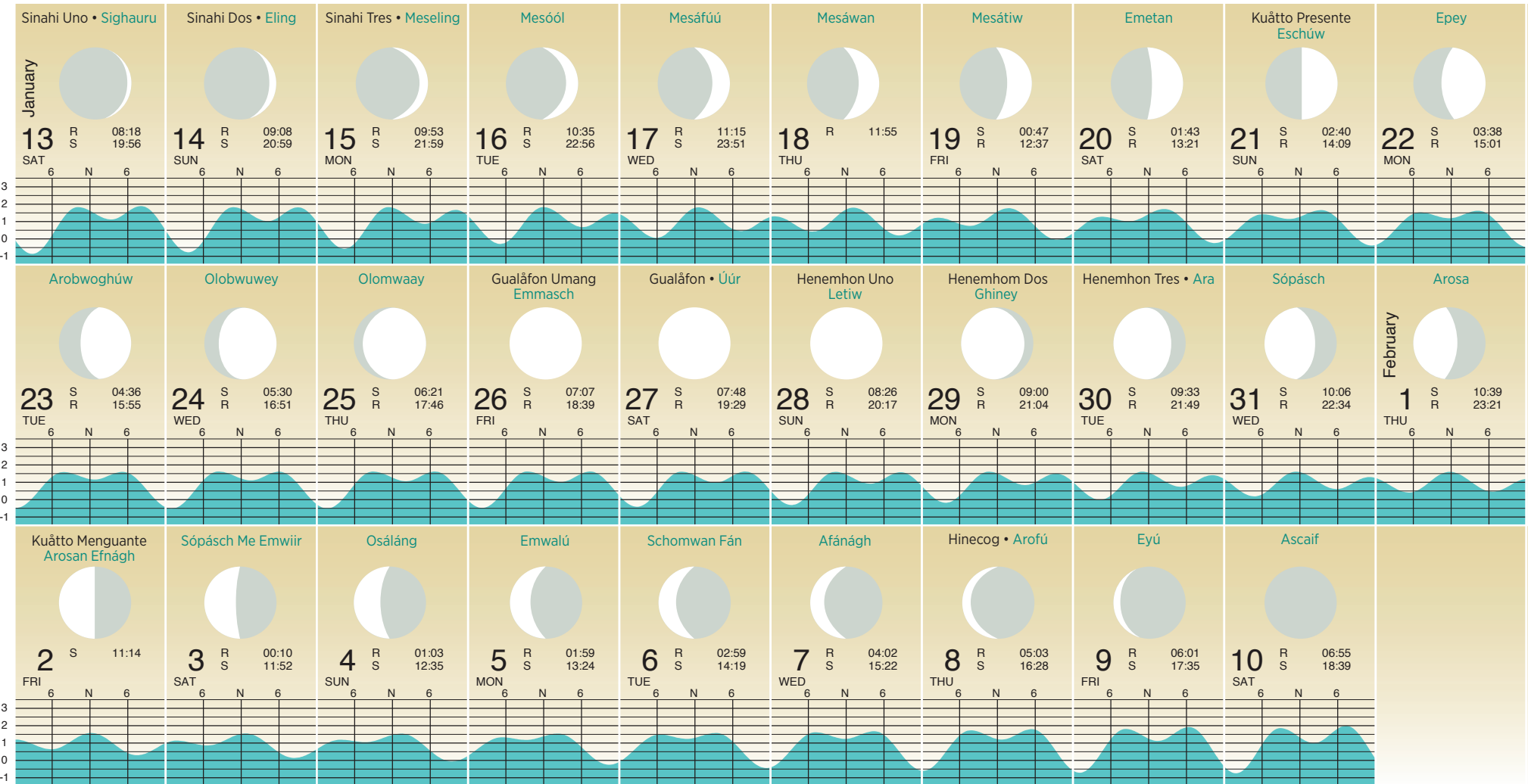
These events promote responsible fishing practices, involving data collection on catches, hosting fishing clinics, presenting awards for ocean clean-up efforts, and imparting fishing efficiency to the youth, such as precise and selective *talaya* casting.



Tasi To Table's outreach includes teaching the youth safe handling of catch. Photo: TTT

Tumaiguini Schoowl

January 13–February 10, 2024



Moon-related observations and activities



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Sustainable Fishing Gear

George Moses spends his time fishing mostly inside Saipan's lagoon for *mafuti* (emperor fish) often joined by his wife or grandkids. He prefers to fish without any weight or lead at the end of the line, ensuring no lead gets tangled in coral. He attaches fresh bait to the hook and let's it sink slowly. George finds this method highly successful and teaches his family to do the same, keeping the lagoon free of contamination from lead and other weights.

Photos: George Moses



George and his grandson RJ Rasiang participate in the annual I Sanhalom Laguna Anglers (ISLA) Association's Mafuti Derby in 2021.



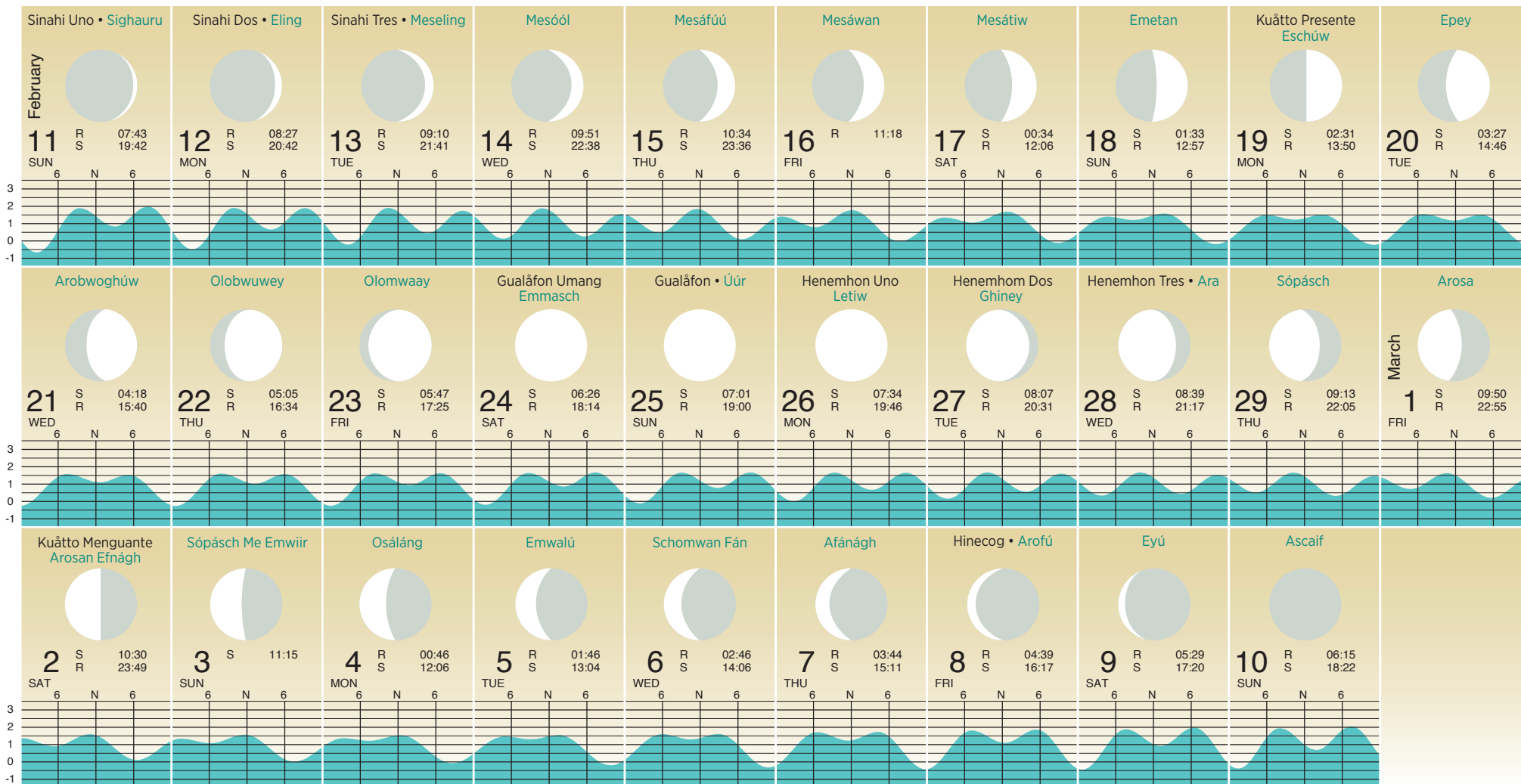
RJ proudly shows off his prize-winning mafuti catch of the 2023 ISLA Mafuti Derby.



George's granddaughter Kiani Jayde Itibus is all smiles with her catch. Saipan's lagoon is ideal for teaching kids how to fish sustainably. Catching fish is easy and using non-lead fishing methods makes it more fun by fighting the fish directly, one fish at a time.

Ma'imo' Méél

February 11–March 10, 2024



Moon-related observations and activities



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Community-Based Fishery Management

The Northern Islands of the CNMI is pristine, its natural resources abundant and ecosystem healthy. To protect the islands from the effects of climate change, sea level rise, human impacts and other influences, it is important to have a resource management plan in place. Continuing efforts initiated in 2015, the Council will soon work with the Northern Islands Mayor Valentino Taisacan to develop a fishery management plan, adding to his homestead and infrastructure development plan.

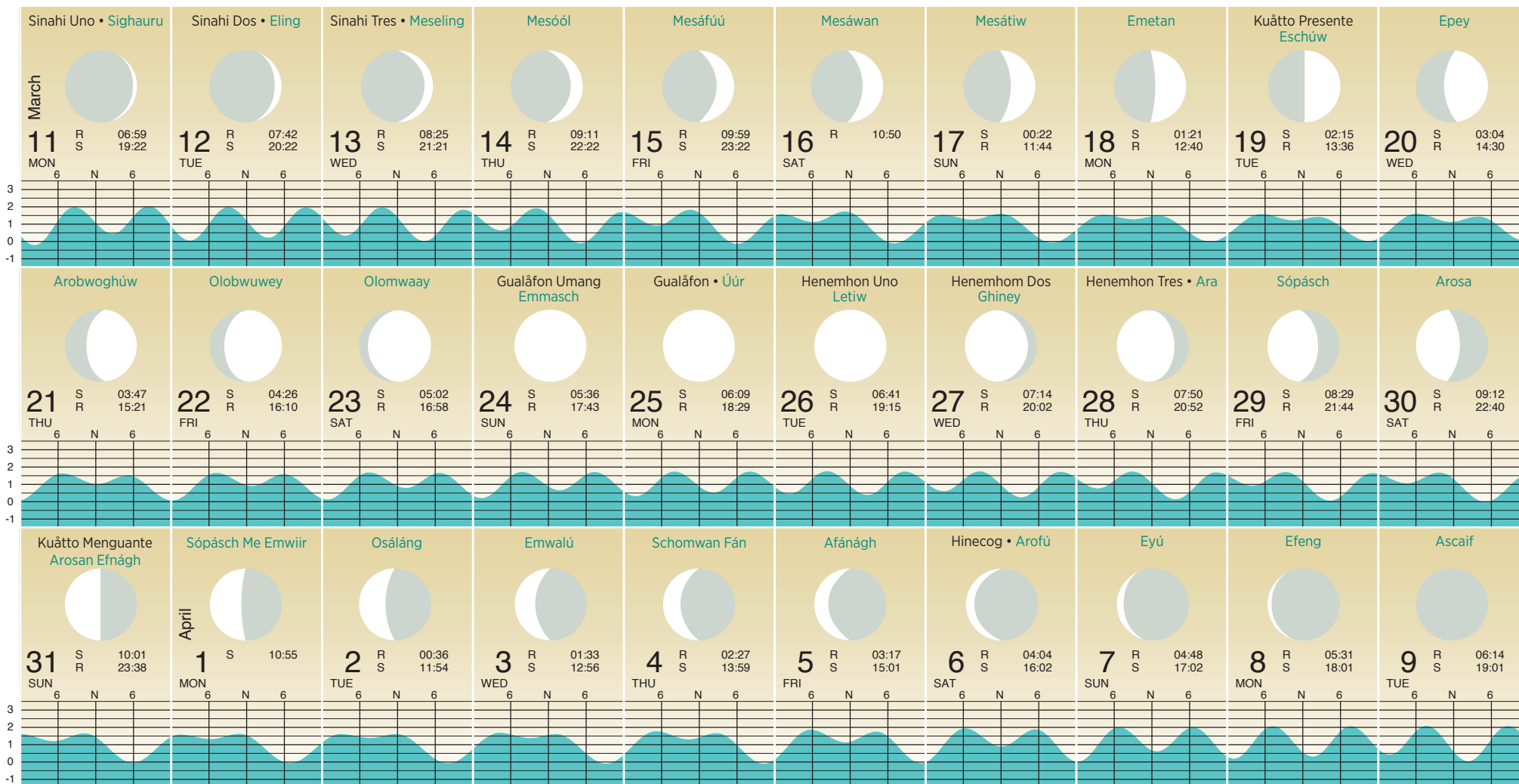
Photos: WPRFMC



Above and left: Participants at the CNMI Northern Islands Community-Based Fishery Management Plan Workshop in 2016 map the resources around Pagan Island.

Umatalaf Máilap

March 11–April 9, 2024



Moon-related observations and activities



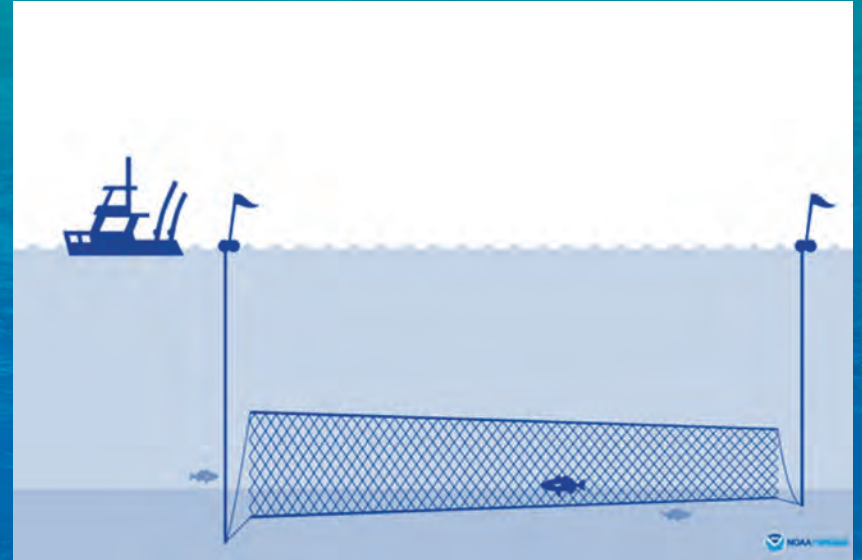
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Local Fisheries Management Initiatives

The CNMI Division of Fish and Wildlife is working on a draft coral reef management plan and fisheries management plan. Since 2000, SCUBA spearfishing and gillnets have been banned in the CNMI. Both methods were restricted to reduce nearshore commercial and non-commercial fishing pressure, and the gillnet restriction helps to mitigate impacts to coral reefs.



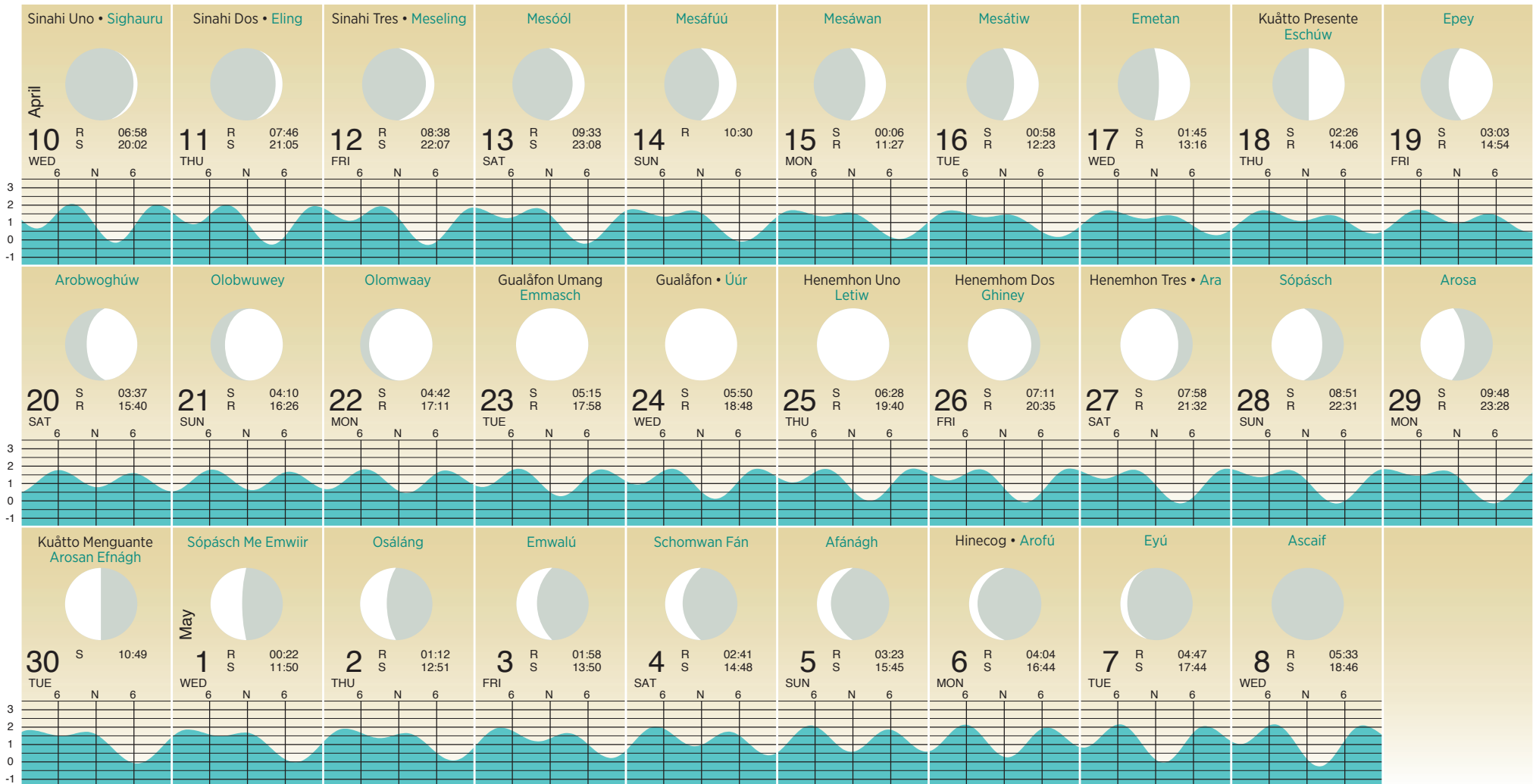
A tourist enjoying a bommie (outcrop of coral reef) of fusiliers. A healthy reef ecosystem benefits everyone.
Photo: WPRFMC



A gillnet is a vertical sheet of netting that hangs in the water column, typically set to catch fish by their gills as they swim into it. Gillnets can entangle non-target species like sea turtles and marine mammals. When they are not properly managed or abandoned, they can contribute to a phenomenon known as “ghost fishing” or damage coral reefs.
Graphic: NOAA Fisheries

Lumuho' Séétá

April 10–May 8, 2024



Moon-related observations and activities



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Environmental Cues and Seasonal Fishing

Fishermen in the Marianas long ago learned that there are natural cues to signal the arrival of certain seasonal fish. Ripening of the *kamachile*' (Manila tamarind), early evening swarms of termites, and even lightning in the distance are some signals that have proven reliable over generations. Fishermen look for these cues before going fishing for seasonal species like *atulai* (bigeye scad) and *mañahak* (juvenile rabbitfish).

Photos: Perry Mesngon



Rota fisherman gathering his *talaya* and catch of seasonal *mañahak*. Fishermen spend time scanning the water for signs of the arrival of seasonal fish, but knowing natural cues make for a more successful and timely harvest season.



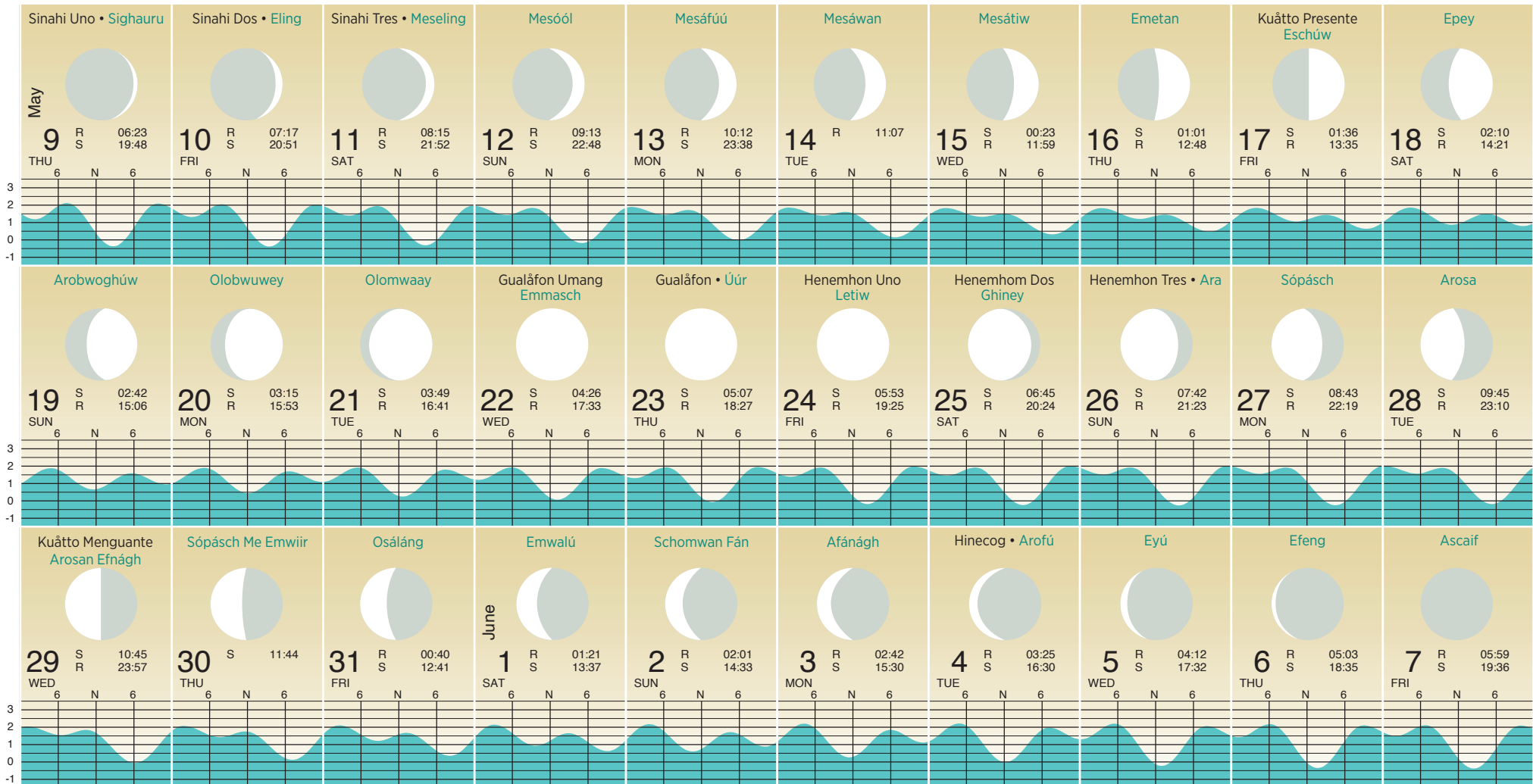
When the *atulai* is running, fishermen can be seen along Rota, Tinian and Saipan's leeward shores using *talaya* and rod and reel to catch their dinner.



Photo: Guam Division of Aquatic & Wildlife Resources (DAWR)

Makmāmao : Naa

May 9–June 7, 2024



Moon-related observations and activities



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Technology in Fishery Management

Knowing in near real-time where tunas are aggregating makes pelagic fishing more efficient and profitable. New technological advances regarding remote underwater detection provide a unique opportunity to overcome some of the potential barriers that limit the expansion of artisanal pelagic fisheries across the tropical Pacific. Small echosounder buoys that identify pelagic fish and communicate those findings via satellite links can help identify fish at depths of more than 100 meters, identify different species and produce biomass (total weight) estimations. One such buoy was attached to a fish aggregating device and deployed off the coast of Guam in 2021. Before its detachment in February 2022, the smart FAD detected a biomass peak of up to 105,000 pounds of tuna between 60 and 115 meters (195-360 feet).



Echosounder buoy tethered to a FAD off Guam. Photo: Jaime Bass, Guam DAWR

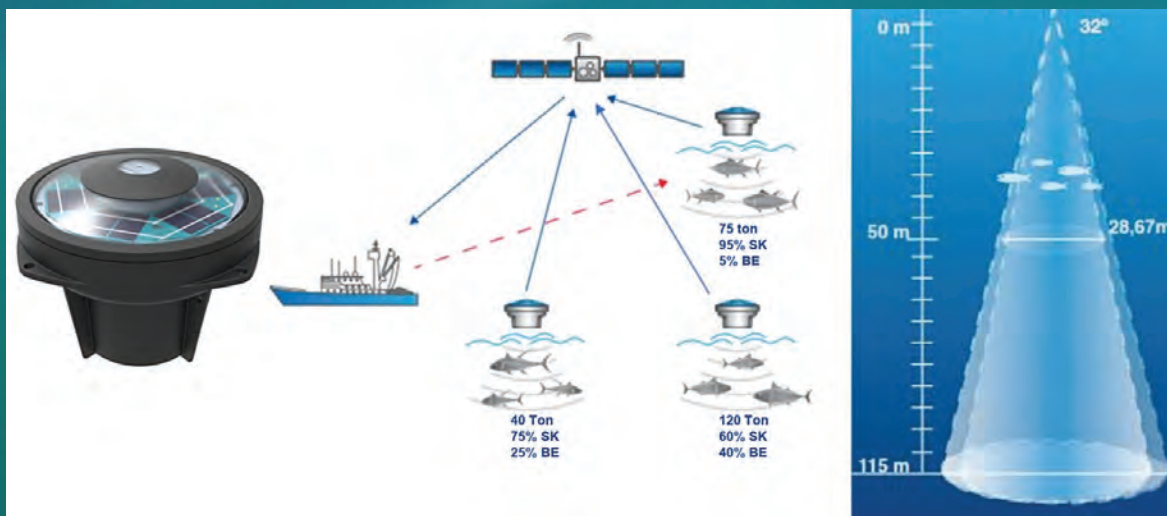


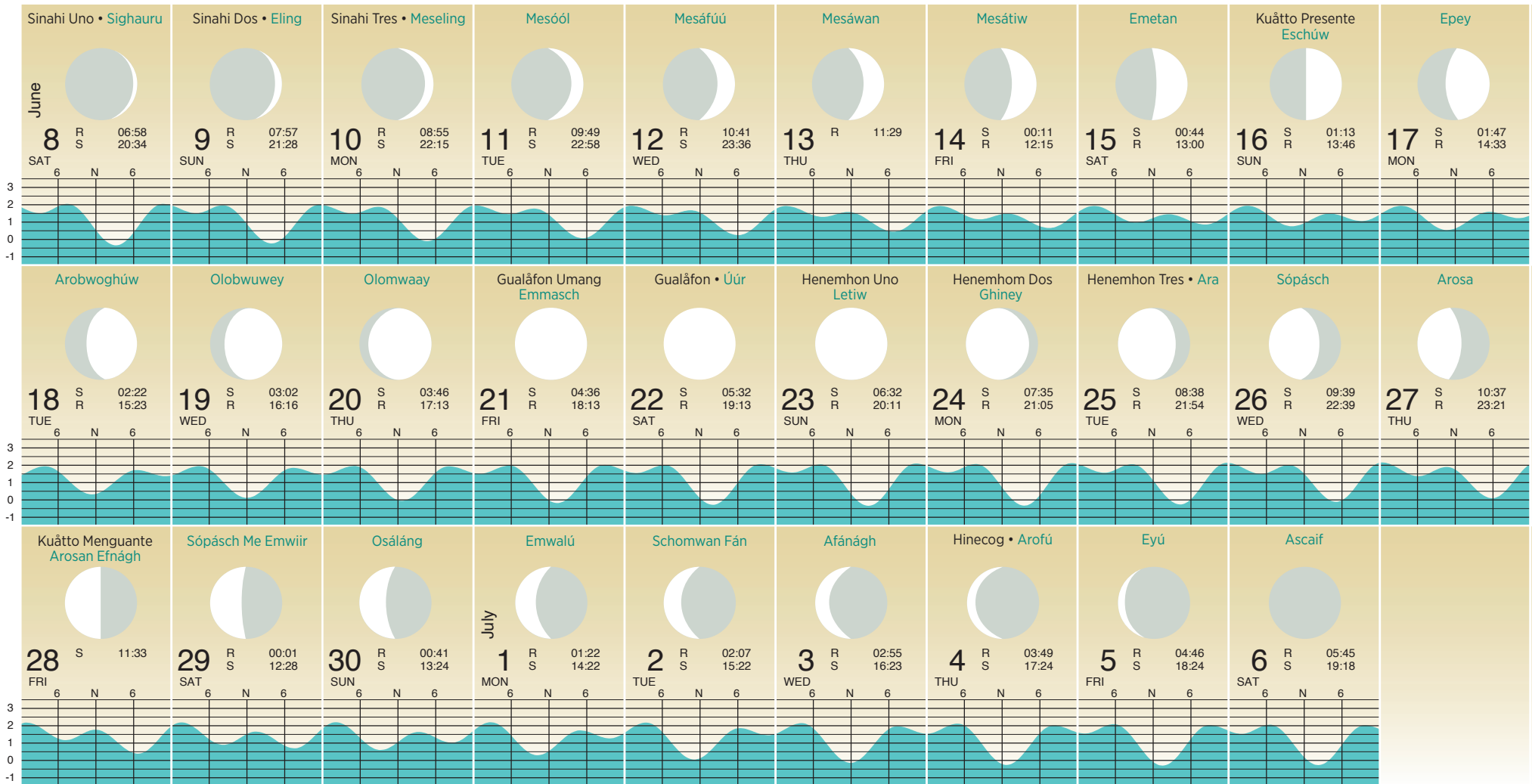
Image illustrating echosounder satellite connectivity and transmission of data on fish quantities detected to the receiving vessel (left). The cone on the right shows the widening of the underwater beacon coverage down to 115 meters (~380 feet). Image: Javier Cuetos-Bueno/The Nature Conservancy



Although not new, wave buoys play an important role in fishing safety. They transmit critical weather information fishermen need to plan their day, such as wave height, wave length and water temperature. Photo: Jason Miller and Pacific Islands Ocean Observing System

Mananaf Ghúúw

June 8–July 6, 2024



Moon-related observations and activities



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Youth and Fisheries Education

Empowering the CNMI youth with knowledge about local fisheries and sustainable practices is a vital mission undertaken by two local non-profit organizations.

Established in 2020, Tasi To Table (TTT) engages youth through teaching fishing methodologies, boating safety, ways to protect and safeguard the environment, and about mental health. The program, which offers elective credits to high school students, also teaches participants about mentoring and leadership qualities by holding student-organized fishing tournaments. The Council has partnered with TTT since its inception to share about its fishery capacity-building programs, activities in the community and fishing regulations like the Magnuson-Stevens Act. www.tasitotable.com

The Talaya Club teaches youth and adults to become proficient, responsible, and resource conscious *talayerus/talayeras*. Their four-month curriculum includes technical craft knowledge, seasonalities of local food fishes, responsible fishing practices, catch logging and importance of fishery management, preservation/conservation modules, and group stewardship projects. <https://talayaclub.org>



TTT President and Council member Gene Weaver provides a tutorial to students on Rota about different types of fishing gear.

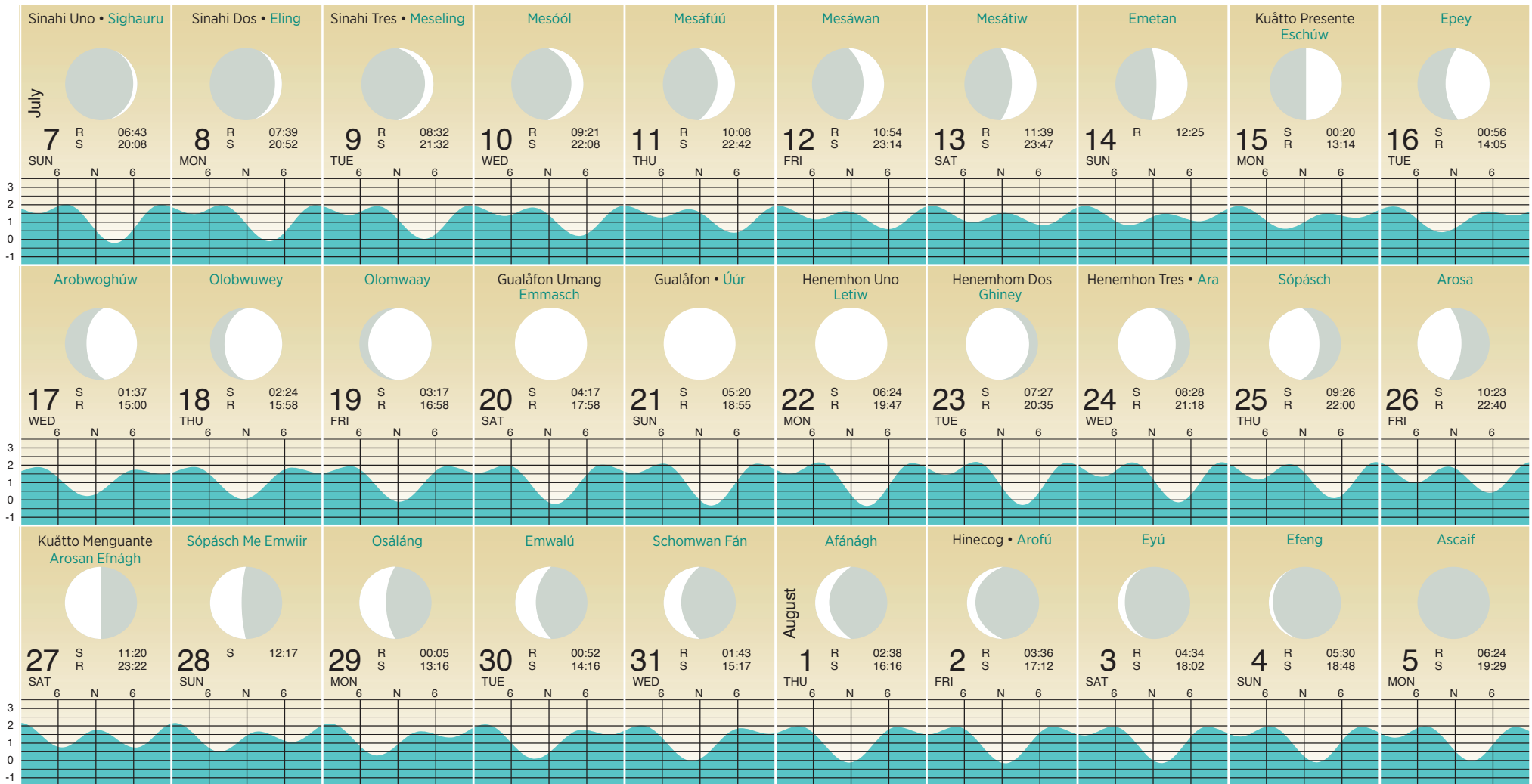
Photos: Floyd Masga



The Talaya Club works with the local community and schools to teach the art of net throwing and fish catching techniques.

Semu Uul

July 7-August 5, 2024



Moon-related observations and activities



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Responsible Marine Tourism

CNMI's economy is dependent on tourism. The Marianas Visitors Authority works with tour agencies in Korea, Japan, Taiwan and China to share information about how to safely enjoy the natural marine environment. Visitors are encouraged to enjoy the abundant sea life and eco-friendly activities.

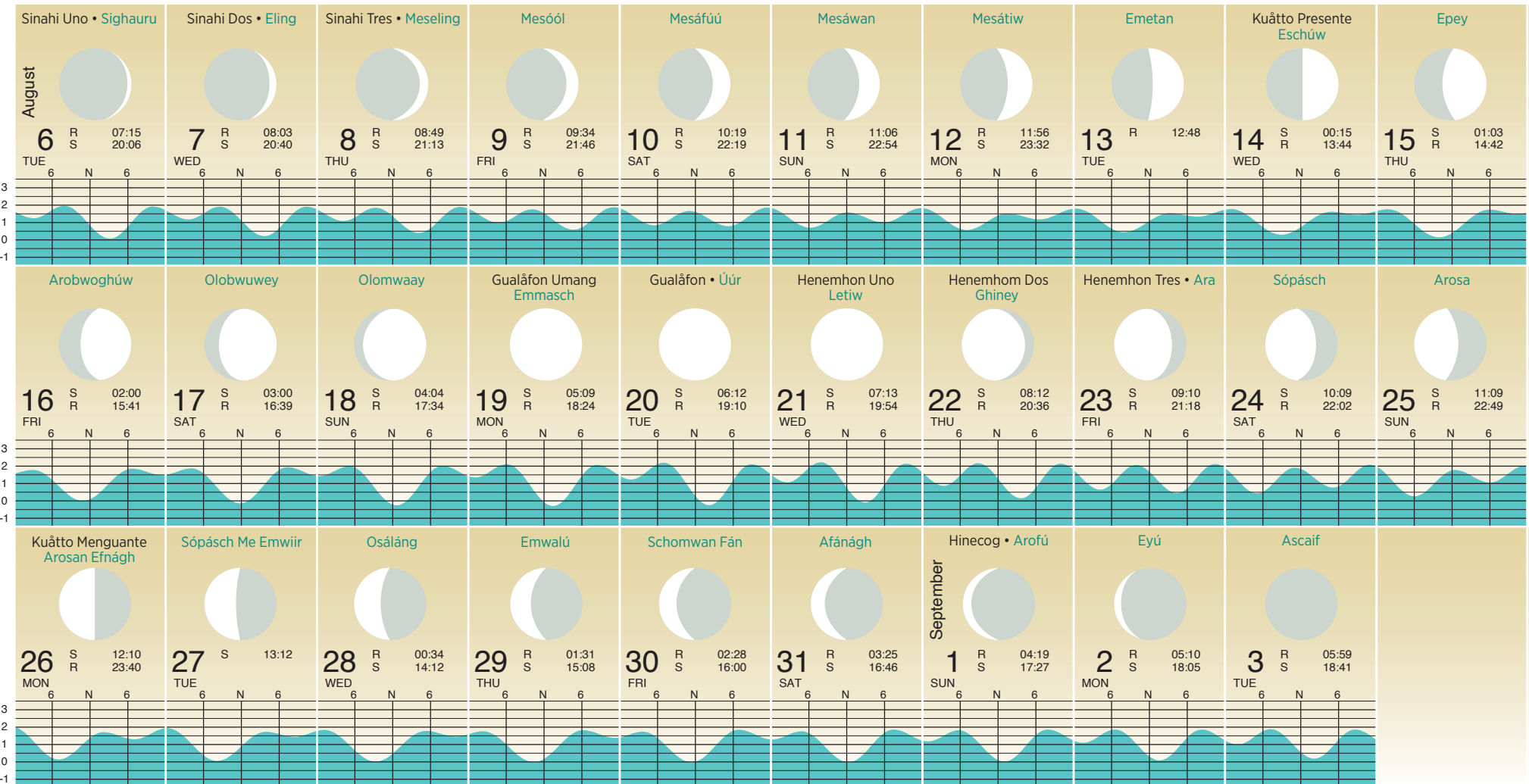


A visitor enjoys fishing, one of the multitude of marine activities in the CNMI, engaging in the responsible practice of catch-and-release. Photo: Saipan Sea Ventures

Signs, such as this one on Mañagaha Island, are an important way to inform users about what they can do to help protect fragile resources in the Marianas, while encouraging visitor friendly/community-accessible recreation areas. Photo: WPRFMC

Tenhos Elúwel

August 6–September 3, 2024



Moon-related observations and activities



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Multi-Generational Fishing

Mike Fleming is a man with fishing in his blood. He has been spearfishing and hook-and-line fishing from a young age. By sharing his vast knowledge of the sea with his family and friends, he creates a bridge that connects the generations and honors the legacy of sustainable fishing practices.



Mike's friend Marc Artero with his niece Antonia Artero. Teaching kids while young to appreciate the marine environment and what it provides is essential to a future all will enjoy. Photo: Marc Artero



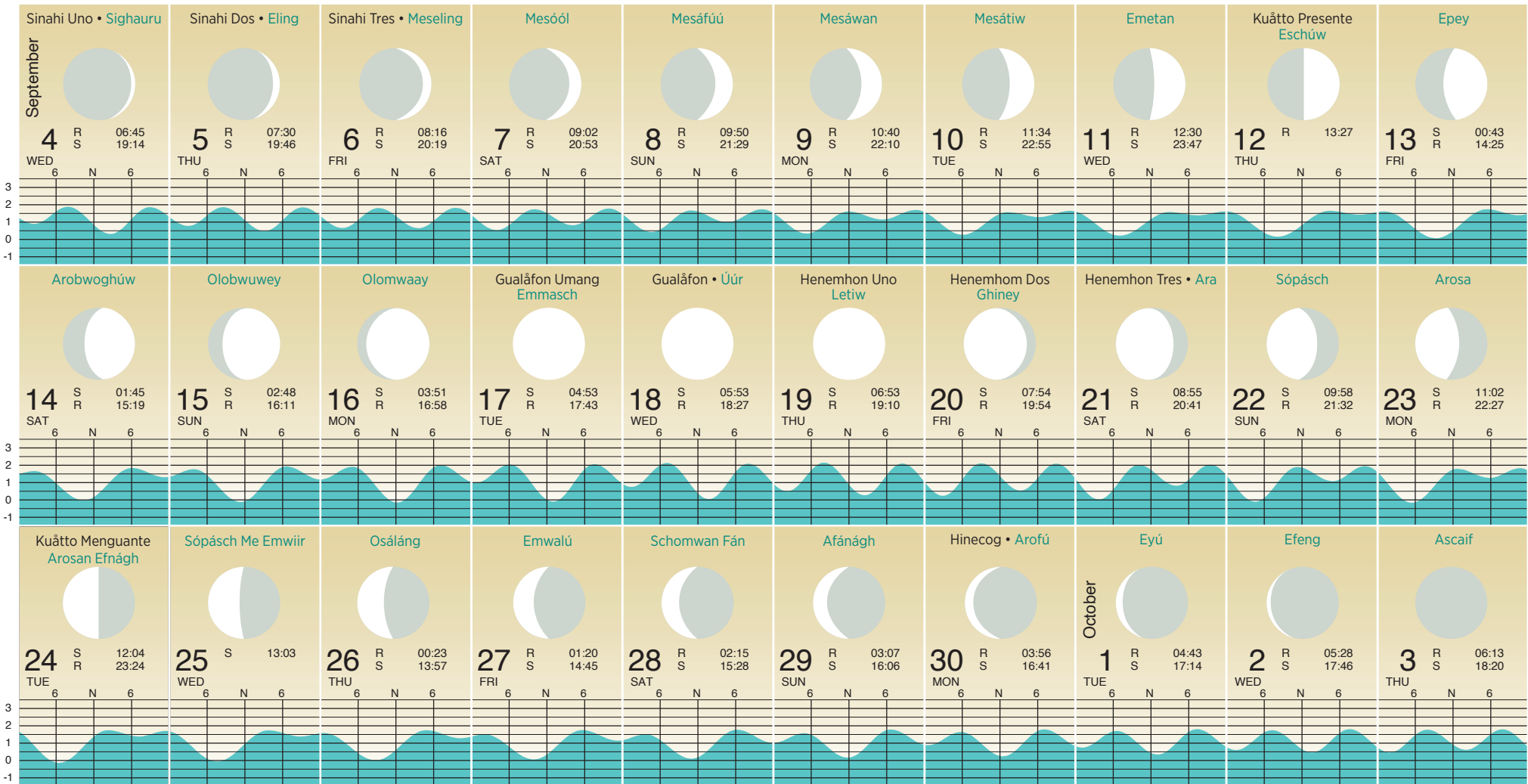
Mike shows his 8-year-old grandson Edward Diaz II proper fishing techniques and fish handling. Photo: Mike Fleming



Edward with a bounty of fish caught near Banzai Cliff. Photo: Mike Fleming

Lumámlam: Maal

September 4–October 3, 2024



Moon-related observations and activities



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Responsible Seafood Choices

In the CNMI, seafood is not just a meal, it's a connection to our oceans. Make responsible seafood choices by visiting NOAA FishWatch to see the status of fish harvested in U.S. federal waters. Search Pacific Islands seafood profiles for sustainability metrics such as up-to-date information on population, fishing rate, habitat impacts, and bycatch at www.fisheries.noaa.gov/topic/sustainable-seafood.

Managing fisheries is a dynamic process. It involves the continual monitoring of species populations, environmental factors and fishing pressures. The Council uses adaptive management to adjust its strategies in response to changing conditions.



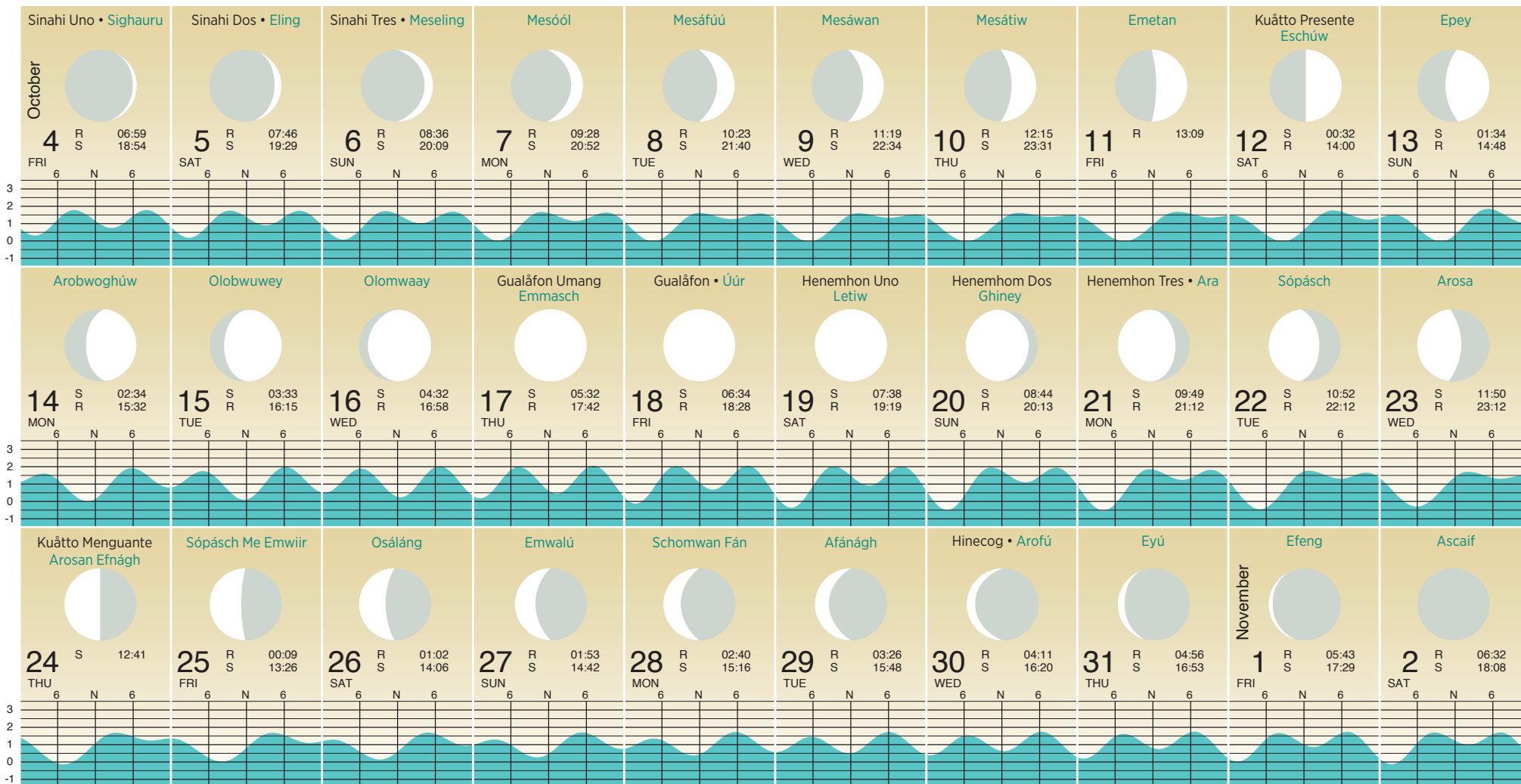
The *lagua* (parrotfish) is not only one of the most desirable fish to eat in the Marianas, but it also plays an important role in the ecosystem and health of the reefs. *Lagua* are herbivores and feed mainly on algae that they scrape from coral using their strong beaks. Photo: James Borja



Saipan bottomfish fisherman Lino Tenorio teaches responsible deep bottom fishing methods to target specific species at specific water column depths for the table. Eating fresh local catch supports local fishermen. Photo: Lino Tenorio

Faguálo' Itch

October 4–November 2, 2024



Moon-related observations and activities



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Local Seafood Recipes

Sample the flavors of the CNMI with these local recipes.

Inaflitun Guihan (Fried Fish) yan Finadene

Score fish on both sides, season with salt and black pepper, including into the cuts, and fry in oil until crispy. Serve with fresh white rice and finadene (optional).

Finadene

Mix together 1 cup soy sauce, juice from 1 lemon, 1/2 onion (thinly sliced), and tuba vinegar or white vinegar. Adjust ingredients to taste.



When local fishermen catch gindai, they keep them for the house, where the preferred preparation method is fried crispy. Photo: Jason Ray Cruz

Inaflitun Mañahak yan Finadene Apaka (White Finadene)

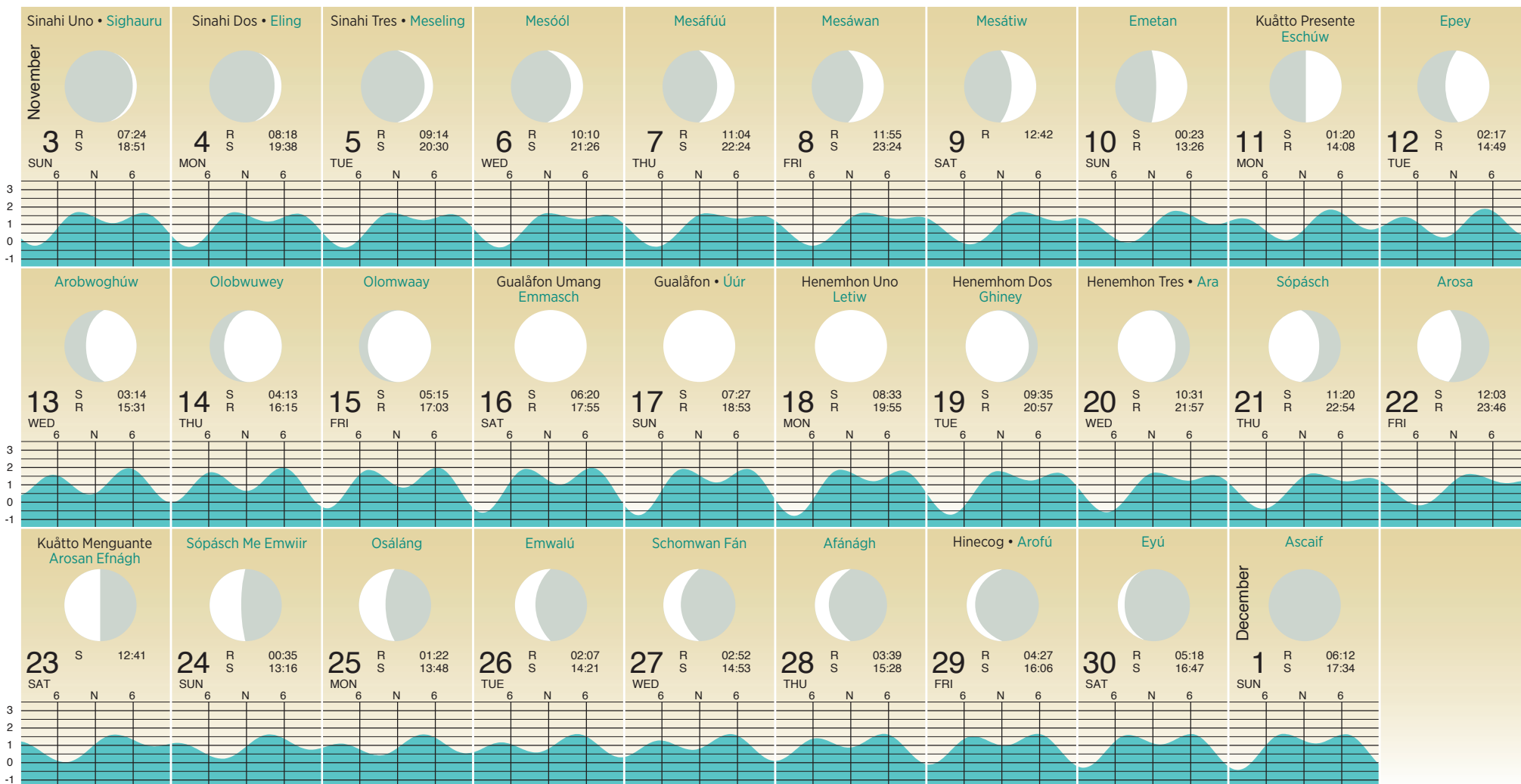
Fry about 1 pound of mañahak in oil until crispy. Add a dash of salt as soon as the fish are removed from the pan. Dry on paper towels. Mix together the juice from 1 lemon, 1 tsp salt, 1/2 onion (sliced), 1 long stalk of green onion (thinly sliced), and 8 oz tuba vinegar. Salt to taste.



Fried and eaten whole, freshly caught *mañahak* is delicious when prepared with white finadene. Photo: Guam DAWR

Sumongsong Sarobwél

November 3-
December 1, 2024



Moon-related observations and activities



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Reef Restoration

CNMI coral reefs face various threats including bleaching and crown-of-thorn starfish outbreaks. To help them recover from past events, corals are being grown in nurseries in Saipan lagoons and then outplanted on degraded reefs. Over the last five years, Saipan's first nursery has grown from 10 tree structures to 23 tree structures and eight tables, housing thousands of coral colonies representing 11 species.

The coral culturing and restoration project was funded by NOAA Fisheries and is being implemented by Johnston Applied Marine Sciences (JAMS), with the CNMI Division of Fish and Wildlife and the Division of Coastal Resources Management. In 2024, JAMS is expanding its ocean-based nursery and land-based facilities, and greatly upscaling its outplanting efforts. <https://jamssaipan.com>

Alyssa Hobbs outplants staghorn coral. Coral reefs act as nurseries to many fish species by helping provide shelter from predators, giving fish a chance to grow.

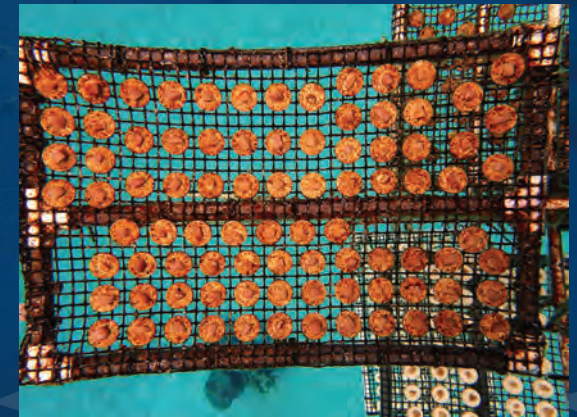


Each nursery tree was created with a PVC backbone and 10 fiberglass arms. Each fiberglass arm has 10 holes for coral fragments secured by monofilament line, holding 100 corals per tree. The trees are secured to the bottom using duckbill anchors.

Photos: JAMS



Acropora gobiceps suspended from a coral nursery tree.

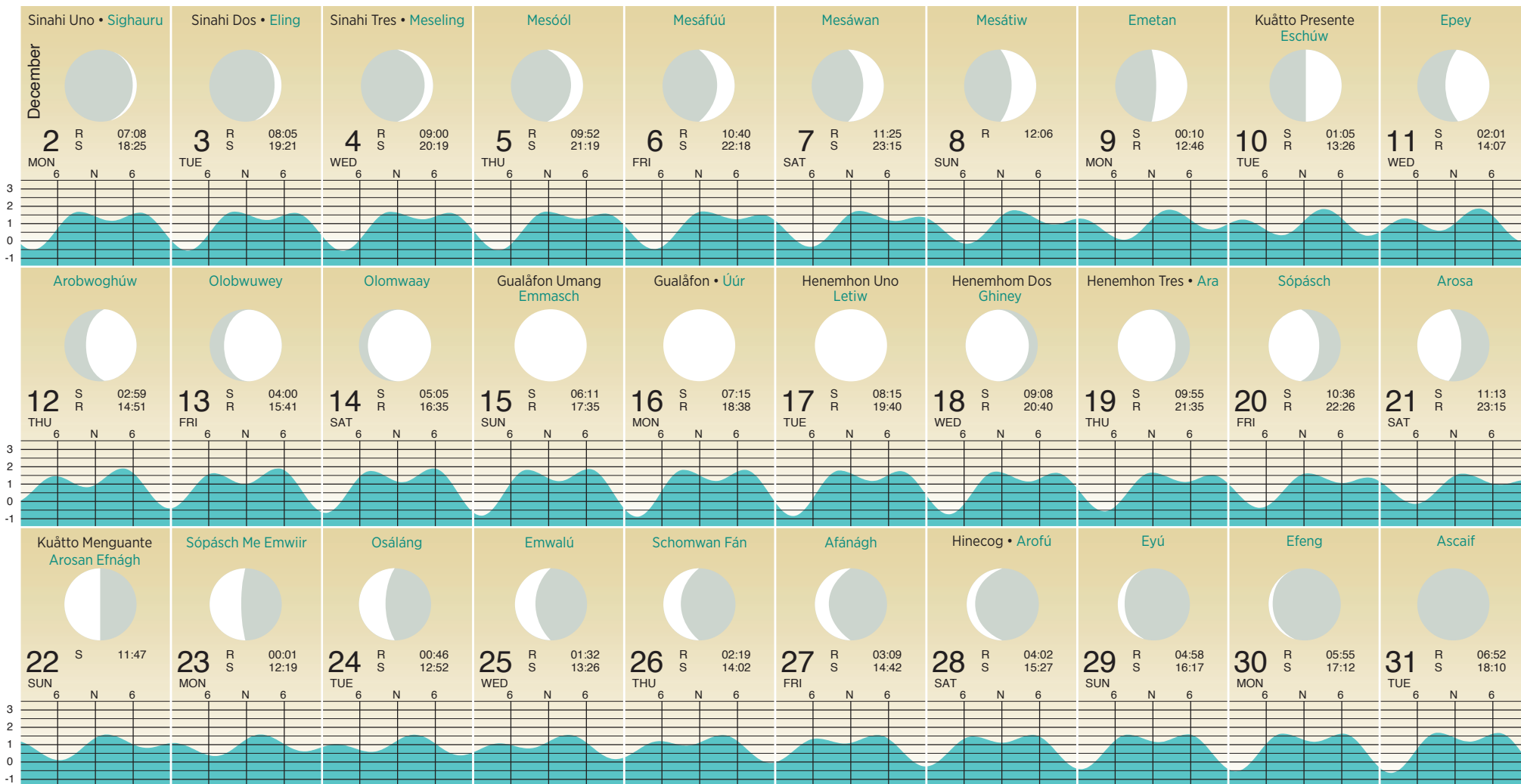


Coral nursery tables are constructed with a wire mesh design capable of supporting corals of opportunity, substrates with micro-fragmented corals, and larval seed beads from the Ruth Gates Innovation Restoration Grant project.



Umayanggan Oromoi

December 2-31, 2024



Moon-related observations and activities



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Public-Private Partnerships for Conservation

Because of his frequent travels between Saipan, Tinian, Rota and Guam, traditional navigator Captain Cecilio Raiukuilipiy entered into an informal agreement with the U.S. Coast Guard to report any signs of foreign vessels that may be fishing within the CNMI's managed waters. This collaboration demonstrates how effective working together can be to combat illegal fishing activities, adding another layer of protection to the region's marine resources.



Illegal fishing in Marianas waters observed from Captain Cecilio's boat. Photo: Cecilio Raiukuilipiy



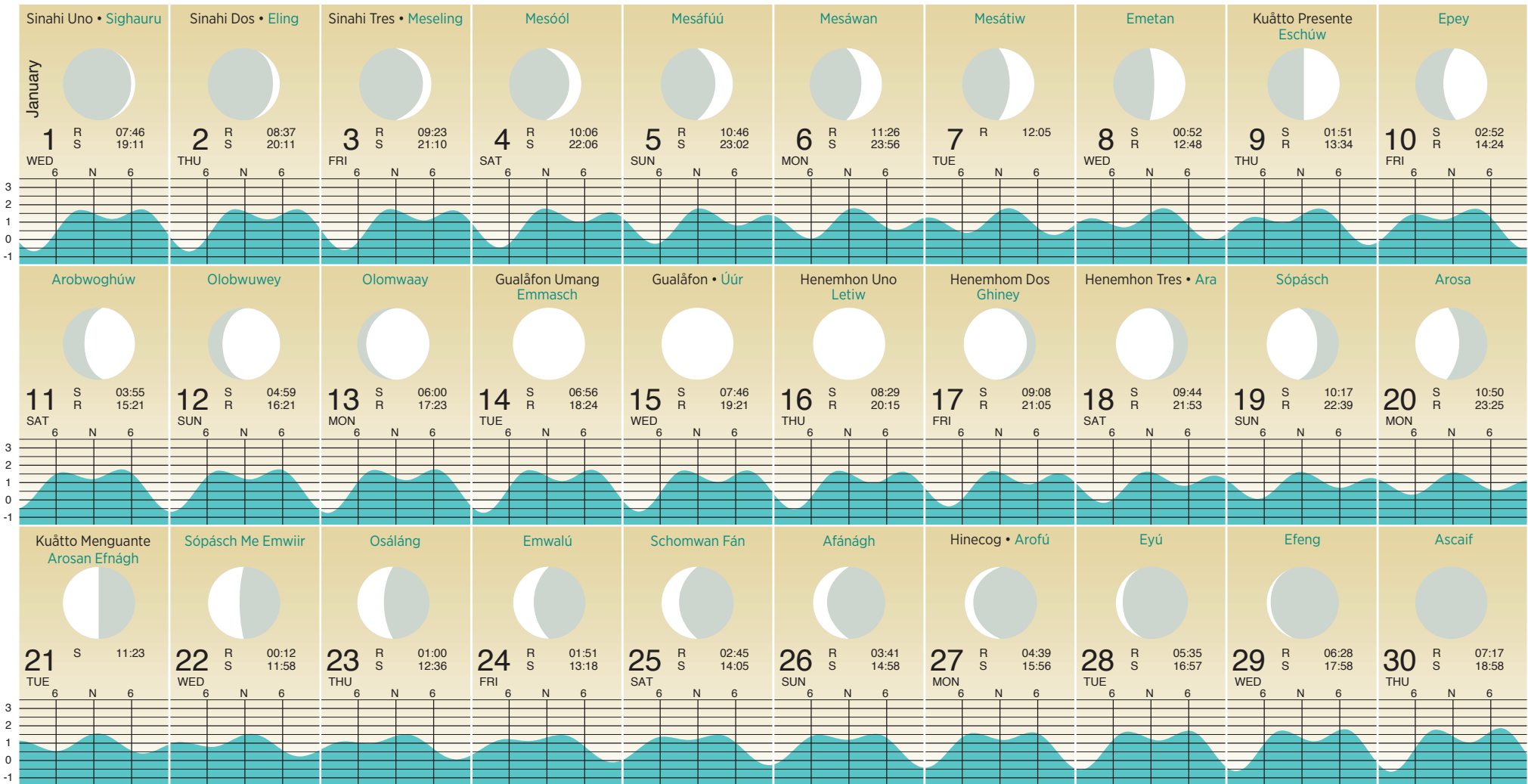
USCG Sector Guam trains to combat illegal fishing in the Mariana Islands and the high seas. Photo: USCG



Photo: WPRFMC

Umagáhaf Schoowl

January 1-30, 2025



Moon-related observations and activities



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About This Calendar

The **Western Pacific Regional Fishery Management Council** has produced traditional lunar calendars for the Commonwealth of the Northern Mariana Islands (CNMI) since 2007. The intent is to raise awareness about traditional ecological knowledge and enhance community involvement in fishery management. The *2024 Eskaleran Pulan Chamorro/2024 Refaluwasch Pápáál Maram* (Chamorro/Refaluwasch Lunar Calendar) shares various aspects of sustainable fishing, from fishing gear, to local management initiatives and restoration projects, to educating the youth to be the stewards of tomorrow.

The CNMI is a 300-mile archipelago consisting of 14 main islands, with a total land area of 183.5 square miles. The principal inhabited islands are Saipan, Rota and Tinian, with the uninhabited Island of Aguiguan (Goat Island) located southeast of Tinian. The northern, largely uninhabited islands are Farallon de Medinilla, Anatahan, Sariguan, Guguan, Alamagan, Pagan, Agrihan, Asuncion, Maug Islands and Farallon de Pajaro (Uracas).

Chamorro and Refaluwasch are the indigenous people of the Mariana Archipelago. Chamorro and Refaluwasch, along with English, are the official languages of the CNMI. Words in italics in the main text are in Chamorro. The Chamorro names for the lunar months and moon phases are in brown, and the Refaluwasch names are in teal. The moon phases are for Garapan. Data to discern the first day of the lunar month are used with permission from HM Nautical Almanac Office, UKHO and the Keeper of Public Records, UK. The tide charts with moon rise and set times are in Chamorro Standard Time for Saipan and were provided by OceanFun Publishing, NZ.

Lunar month names may vary due to the traditional reliance on oral history transmitted through generations. This calendar uses Chamorro and Refaluwasch lunar month names following the guidance of Pedro Itibus, Cecilio Raiukiulipiy, Ramon Tebuteb, and the Sablan Refaluwasch family.

A special *un dangkulu na si Yu'us ma'ase* (Chamorro) and *ghilisou tumo'o'gh* (Refaluwasch) to calendar content contributors including Council family members James Borja, David Cabrera-Talaya Club, Lawrence Concepcion, Richard Farrell, Mike Fleming, Tony Guerrero, Perry Mesngon, Jason Miller, Cecilio Raiukiulipiy, Ramon Tebuteb, Lino Tenorio, Gene Weaver-TTT; Jason Ray Cruz; Javier Cuetos-Bueno, TNC; Floyd Masga, CNMI DLNR; Steven McKagan, NOAA Fisheries, and JAMS; George Moses; PacIOOS; Tony Scraggs, SFA; Michael Tenorio, CNMI DFW; Brent Tibbats, Guam DAWR; and USCG.

For an electronic version of this calendar, go to www.wpcouncil.org/educational-resources/lunar-calendars.

Send us an email at info@wpcouncil.org to let us know how you use our calendar!

About the Council

The **Western Pacific Regional Fishery Management Council** was established by Congress in 1976 to manage fisheries in the offshore waters surrounding Guam, the CNMI, American Samoa, Hawai'i and the U.S. Pacific Remote Island Areas. The fisheries in federal waters surrounding Guam are managed under the Mariana Archipelago and Pacific Pelagic Fishery Ecosystem Plans. Traditional knowledge and wide community involvement are integral parts of the ecosystem-based approach to fishery management.

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Front cover photo: Tasi To Table was joined by Swim For Life CNMI and Talaya Club Marianas at Sugar Dock on Saipan to teach TTT's student members how to swim, catch fish using the traditional method of *talaya* fishing, and tie several useful fishing knots. Photo courtesy of Island Tide Records and David Cabrera.

Back cover background photo: Student *talayeru* practicing net casting. Photo: Floyd Masga