

Impacts of Closed Season on Philippine Sardines Industry: a tale of two seas

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Since 2011, the Philippine Government has imposed a closed fishing season on various major fishing grounds during the sardine spawning season. Implemented during the tail end of the year until March the following year, the closed fishing season has been both a boon and bane for communities. In the sardines capital of the Zamboanga Peninsula in southern Philippines, the ban has boosted catch sizes for artisanal fishers, while in the Visayan Sea in central Philippines, catches have dwindled. Experts point to different implementations of the fishing ban in the two regions and highlight the need to assess the economic implications of the measures, particularly to marginalized fishers.

In 2016, villagers in the town of Labason in the southern Philippines' Zamboanga Peninsula woke up to a spectacle that they never thought could happen in these modern times, which is the sight of tons of wriggling sardines washed ashore. Ecstatic residents, young and old alike, rushed to the shoreline with all kinds of containers and filled them with these sardines (*Sardinella lemuru*) locally called *tamban* that they scooped up with their bare hands. The extraordinary event of the heyday fish harvest was caught on video that went viral on social media. For most Filipinos, sardines are a cheap source of protein. A can of sardines, which costs about PHP 20 (USD 0.40) at mom-and-pop stores, is a must-have pantry item in poor Philippine households.

The President of the Coalition of Municipal Fisherfolk Association in Zamboanga Sibugay (COMFAZS), *Mr. Robert "Dodoy" Ballon* once said that the "sardine galore" event occurred not just in Labason but also in nearby Pagadian City and Tukuran Municipality. *Mr. Ballon*, a two-time national



Small-scale fishermen resume fishing operations after the closed fishing season in the Zamboanga Peninsula was lifted in 2017
(Image courtesy of the Provincial Information Center – Zamboanga del Norte)

winner of the *Gawad Saka ng Pangulo Award* (Presidential Excellence Award for Agriculture), attributed the unusual beaching of *tamban* to an annual, three-month-long ban on commercial sardine fishing.

The fishing ban extends from 1 December to 1 March, the peak of the sardine spawning season, and covers commercial operators in a conservation area spanning 22,260 km² in portions of the East Sulu Sea, Basilan Strait and Zamboanga Sibugay Province. Under Philippine law, violators of the fishing ban can face imprisonment of six months to six years, as well as fines ranging from PHP 40,000 to PHP 1 million (USD 830–USD 20,700), confiscation of their catch and gear, and loss of fishing licenses. The closure was introduced in 2011 by the Bureau of Fisheries and Aquatic Resources (BFAR) after studies conducted in the Zamboanga Peninsula, the heart of the country's sardine production, concluded that the sardine catch was dwindling and individual sardines were getting smaller, apparently due to overfishing.

In addition to commercial fishing and canning, the species has spawned a cottage industry in southern Philippines involving the production of bottled Spanish-style sardines. The combined value of all of these ventures is around PHP 20 billion (USD 413 million), according to data from the Mindanao Development Authority (MinDA).

Industry support

The ban was supported by major players in the sardine industry of Zamboanga Peninsula (**Figure 1**) and has also gained support from small-scale fishers. The big stakeholders, including the canned sardine manufacturers and commercial fishing operators, feared that without conservation measures, the species would dwindle to a point where catches would no longer be feasible for commercial operations, which would result in industry-wide shutdowns that would displace tens of thousands of workers. The municipal fishers also welcomed the conservation initiative, which imposes no additional restrictions on small-scale operators. The fishing ban does not apply to fishing in the zone designated for marginal fishers, called municipal waters, which extend up to 15 km from the shoreline.



Figure 1. Zamboanga Peninsula, an administrative region in the Philippines designated as Region IX, consists of three provinces (Zamboanga del Norte, Zamboanga Sibugay and Zamboanga del Sur) including four cities (Dapitan, Dipolog, Isabela, Pagadian), and the highly urbanized Zamboanga City

Moreover, since commercial fishing operations further offshore are restricted during the closed season, high-value fish such as tuna can stray into municipal waters, to the benefit of the small-scale fishers. “With fewer efforts, municipal fishers catch more sardines and other fish species during the closed fishing season because commercial operations are not allowed. It’s a blessing to the marginal fisherfolk,” *Mr. Ballon* exclaimed.

The fisheries sector in the Philippines employs at least two million people, with more than half coming from the local communities. While major businesses engage in canning, locals are into fish drying as is the case of a community in Olingan, a town in Dipolog City, Zamboanga del Norte.

During the fishing ban, *Mr. Ballon* said that a municipal fisher can catch 50–100 kg of sardines even without venturing far from the shoreline, because schools of the fish swarm close to shore to feed on plankton. Records from BFAR show a steady rise in the volume of sardines landed by both commercial and municipal fishers. From 141,658 t in 2015, the catch rose to 208,000 t in 2019.



Fish drying as a community activity in Olingan, Dipolog City, Zamboanga del Norte

(Image by WorldFish via Flickr (CC BY-NC-ND 2.0))

The studies by experts from 2016 to 2018 (*Rola et al., 2017; Rola et al., 2018*) recommended the continuation of the closed fishing season, noting that the results of the ban showed not only an increase in sardine catches but also a rise in the landed catch of high-value non-sardine species such as tuna. “There was a positive impact to society overall,” the authors said. Nevertheless, the workers in the sardine canning plants and commercial fishing companies were displaced during the closed fishing season in the Zamboanga Peninsula, which produces 70 % of sardines in the Philippines. There are at least 26 commercial fishing companies and 11 canning firms operating in the Peninsula, providing jobs for 50,000 people, industry data show.

During the closed fishing season, many displaced sardine cannery workers look for other work to sustain themselves and their families, such as working in the rubber plantations that thrive in the region, or engaging in oyster (*talaba*) harvesting. Others find work in the bottled sardine industry. The Philippine Government, through the Department of Agriculture, also offers easy access to small loans for workers affected by the closed season. The sardine canneries and commercial fishing companies, meanwhile, use the downtime to conduct repair and maintenance operations on their facilities and vessels.

Meanwhile, the *Hon. Emmanuel Piñol*, the Secretary of MinDA and former Secretary of the Department of Agriculture, said that his agency strongly supports the closed sardine fishing season and will continue to engage coastal communities in working for clean and healthy seas. He cited the positive impacts not just for the environment but also in the war to eradicate poverty. “The reinvigorated fishing industry in Zamboanga Peninsula has resulted in the reduction of poverty incidence among fisherfolk families from over 40 % to 34 %,” *Mr. Piñol* said.

An Executive Officer of BFAR tasked to oversee the Zamboanga Peninsula, *Mr. Isidro Velayo, Jr.* said that allowing sardine stocks to replenish is crucial for a sustainable industry, and also has benefits that extend far beyond. To enforce the fishing ban, BFAR deploys three patrol boats to the conservation area and works to improve its cooperation with municipal fishers and other stakeholders. “Protecting certain species has far-reaching benefits to the ecosystem as a whole,” *Mr. Velayo* said. “We need to ensure the abundance of our fishery resources for future use,” he added.

Differing Impacts

While the closed fishing season in Zamboanga Peninsula has become a boon to the region’s sardine industry, the results of similar conservation measures were not as rosy in the Visayan Sea in central Philippines (**Figure 2**), another major fishing ground of the country. A closed season has been in place in

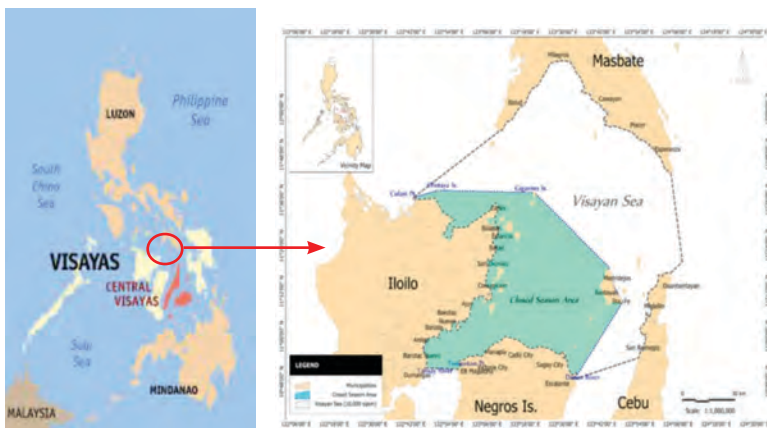


Figure 2. Part of the Visayan Sea in central Philippines, declared as closed season area by BFAR

the Visayan Sea since 1939, to conserve sardines and herring. A BFAR Fisheries Administrative Order expanding the protection to include mackerel, running from 15 November to 15 March every year in selected areas of the Visayan Sea, was promulgated in 1989 but only strictly implemented in 2012 — a year after the closed season was implemented in Zamboanga Peninsula for the first time in December 2011.

In contrast to the Zamboanga Peninsula case, a recent studies by Napata *et al.* (2020a) and Napata *et al.* (2020b) found that catch per unit of effort (CPUE) of fishers surveyed had decreased substantially since the strict enforcement of the closed season in the Visayan Sea began in 2012. This was based on results of their interview of 200 people involved in the local fishing industry, from fishers to processors to traders and buyers.

The mean CPUE of municipal and small-scale commercial fishers before the strict implementation of the closed season started was 358 kg per day, but decreased to 197 kg after 2012, based on data collection conducted from September to December 2015. That period covered two months of the closed season and two months of the open season, the study noted. Moreover, the results also showed that 45 % of the fishers interviewed said they continued to fish during the ban,



Artisanal fishers during the closed fishing season in the Visayan Sea

(Image by Ouie Sanchez for USAID Fish Right)

but following the guidelines meant they had to travel further, take more risks, and expend more resources to travel beyond their traditional fishing grounds to reach parts of the Visayan Sea that were still open for fishing.

Napata *et al.* (2020a) also noted that the ban in the Visayas was repeatedly violated, as indicated in the visible infrared imaging radiometer suite (VIIRS) images provided by the U.S. National Oceanic and Atmospheric Administration’s Earth Observation Group, showing vessels that continue to operate in the prohibited areas at night. One of the major reasons cited by the respondents for non-compliance is the lack of secondary source of livelihood, as more than 60 percent of the respondents have no alternative livelihood and [are] solely dependent on the sardine industry.

On the other hand, the processors (fish dryers) and traders based around the Visayan Sea responded that sardine production increased, but attributed this to supplies coming from outside the restricted area and from neighboring provinces. The study of Napata *et al.* (2020a) therefore noted two key differences between the closed season in the Visayan Sea and that in Zamboanga Peninsula.

First, the closure in Zamboanga Peninsula is industry-led, and monitoring is carried out with the help of the Philippine Coast Guard and the Police Maritime Group. Enforcement in the Visayan Sea is monitored by the local government units. Second, while the closure in the Visayan Sea was applied to fisheries of all sizes, the closure in Zamboanga Peninsula affects only commercial fishers, leaving small municipal fishers free to continue their trade.

Napata *et al.* (2020a) and Napata *et al.* (2020b) also noted that the closed season policy has economic implications, which led to non-compliance. In the case of the Visayan Sea, there is a need to provide the stakeholders with livelihood programs to diversify their source of income, especially those who are highly dependent on sardine fisheries.



The closed fishing season in the Visayan Sea covers both commercial and artisanal fishers

(Image by Ouie Sanchez for USAID Fish Right)a

A New National Law

A new central government policy, the National Sardines Management Plan (NSMP) had been recently hatched and many stakeholders expressed the hope that this new law would herald the introduction of more rigorous and evidence-based fisheries policies nationwide. Approved in June 2020, the five-year NSMP seeks to further develop science-based management of sardine fisheries through harvest control measures, data gathering, and stronger implementation of fisheries laws, among other measures. Specifically, NSMP aims to “guide coordinated management” across the various Philippine fishery management areas (FMA), the borders of which had been first defined by BFAR in 2019. Under the NSMP, the Philippine Government and other industry stakeholders can craft and implement targeted fisheries management that could not only protect the seascape but also provide livelihood for communities.



Large-scale commercial fishing vessels resume fishing operations after the closed fishing season in the Zamboanga Peninsula was lifted in 2018

(Image courtesy of BFAR)

During the interview with *Ms. Gloria Estenzo Ramos*, Vice President of Oceana Philippines, an international ocean conservation group, she said that she believed in the integrity of the NSMP and called for its stringent implementation. The sustainable management of sardine fisheries is one of the goals of the NSMP, and part of its objectives is to determine the impact of the closed season and support the provision of job opportunities during the closed season. She then recommended that the use of technology should be promoted, *e.g.* VIIRS — which typically collects images and radiometric data to provide information on the Earth’s clouds, atmosphere, oceans and land surfaces — to detect violations, especially during the closed fishing season for sardines.

References

- Napata, R. P., Espectato, L. N., & Serofia, G. D. (2020a). Closed season policy in Visayan Sea, Philippines: A second look. *Ocean & Coastal Management* 187, 105115. doi:10.1016/j.ocecoaman.2020.105115
- Napata, R. P., Espectato, L. N., & Serofia, G. D. (2020b). Fish Stock at Risk: Is regulating beneficial for the sardine fisheries of the Visayan Sea? *Ocean & Coastal Management* 187 (4). doi:10.1016/j.ocecoaman.2020.105115
- Rola, A. C., Narvaez, T. A., Naguit, M. R., Elazegui, D. D., Brillo, B. B., Paunlagui, M. M., Jalotlot, H.C., & Cervantes, C. P. (2018). Impact of the closed fishing season policy for sardines in Zamboanga Peninsula, Philippines. *Marine Policy* 87, 40-50. doi:10.1016/j.marpol.2017.09.029
- Rola, A.C., Naguit, M. R., Narvaez, T. A., Elazegui, D. D., Brillo, B. B., Paunlagui, M. M., , Jalotlot, H.C., & Cervantes, C. P. (2017). Assessing Impacts of the Closed Fishing Season Policy for Sardines in Zamboanga Peninsula, Philippines: An Interdisciplinary Approach. Working Paper No. 2017-02. Center for Strategic Planning and Policy Studies (formerly Center for Policy and Development Studies) College of Public Affairs and Development University of the Philippines, Los Baños College, Laguna 4031, Philippines

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