

Access, Equity, and Sustainability: Dimensions of Blue Justice in the Small-Scale Fisheries of Dzilam de Bravo, Mexico



By **Juan Carlos Hernández Padilla***, **Silvia Salas**** & **Miguel Á. Cabrera****

*Instituto Mexicano de Investigación en Pesca y Acuicultura Sustentables. Dirección de Investigación Pesquera en el Pacífico. CRIAP, México

**Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional – CINVESTAV Unidad Mérida, Mexico

Dzilam de Bravo, a municipality in the state of Yucatan, Mexico, has a rich history of fishing that has had significant impacts on social, political, and governance issues. Fishing has been a fundamental activity for the community's subsistence throughout time, with the inhabitants historically relying on marine resources as a key source of food and livelihood. Fishing traditions have been passed down from generation to generation, contributing to the community's cultural identity. Fishing techniques and knowledge have been refined over time, adapting to the changing conditions of the marine ecosystem (Saldaña et al., 2017; Bennett, 2017).

Fishing plays a central role in the daily life of the community, influencing social structure and interpersonal relationships. Families often participate in fishing activities, generating strong community links (Coronado et al., 2023; Salas et al., 2023). The local economy is directly affected by fishing, as it provides employment and income opportunities for many residents and migrants. This affects the distribution of wealth, well-being, and quality of life of the population (Salas et al., 2022). Fishing has been a relevant issue on the local and regional political agenda.

Photo: Octopus boats in the Port of Dzilam de Bravo. 2017. © Miguel Á. Cabrera

Location:

Dzilam de Bravo, Yucatan, Mexico

Ecosystem type:

Marine

Main gear:

Gillnet, harpoon, hook and line, traps, free diving and semi-autonomous, longline, Jimbas (Octopus)

Target species:

Red grouper (*Epinephelus morio*), Caribbean spiny lobster (*Panulirus argus*), Mexican four-eyed octopus (*Octopus maya* & *O. vulgaris*) and others

Number of fishers: 652

% of full-time fishers: 95%

% of fisherwomen: 0%



The importance of fishing in Dzilam de Bravo extends beyond economic activity, permeating cultural identity, social cohesion, political decision-making, and sustainable governance of marine resources. The connection between these issues is essential for the community's integral and sustainable development over time.



Government policies regarding fishing, conservation of marine resources, and access to fishing areas have directly impacted the community of Dzilam de Bravo. The community's active participation in political decision-making related to fishing is essential in protecting their interests and ensuring sustainable practices. Effective governance frameworks are needed to continue improving the management of the area and its natural resources (Laxe et al., 2018). Management decisions in fisheries such as fishing quotas or protected areas, require in-depth involvement of stakeholders to ensure the long-term sustainability of fishing activities (Coppa et al., 2021).

Therefore, the importance of fishing in Dzilam de Bravo extends beyond economic activity, permeating cultural identity, social cohesion, political decision-making, and sustainable governance of marine resources. The connection between these issues is essential for the community's integral and sustainable development over time.

Justice in context

Unequal access to fishing resources

Unequal distribution of rights and access to fishing areas has created economic inequalities among artisanal fishers. The concentration of fishing licenses in the hands of a few people has excluded other fishers from access to economically important fishery resources, such as sea cucumbers. In 2012, when the formal exploitation of this resource began, fishing licenses were only granted to a few cooperatives, leading to conflicts overfishing areas between different groups of fishers (López-Rocha & Velázquez-Abunader, 2019; Coronado et al., 2023). A large population of free fishers (without fishing license) depends highly on permit holders that concentrate the fishing production.

Impacts on fishery resources

Unsustainable fishing practices, such as illegal fishing, illegal trade and overfishing have led to a decline in the resources caught in Dzilam de Bravo. This has disproportionately affected artisanal fishers, whose livelihoods depend directly on the abundance and health of some fisheries like grouper.

Justice in context

Types of justice:

- Distributive
- **Social**
- **Economic**
- **Market**
- **Infrastructure/wellbeing**
- **Regulatory**
- **Procedural**
- **Environmental**
- **COVID-19 related**
- Other

Challenges in the marketing chain

The marketing chain poses challenges, and artisanal fishers often face difficulties in obtaining fair prices for their products. Interactions between fishing cooperatives and artisanal fishers include access to cash or fuel loans on the condition that their product is delivered to the cooperative or the plan owners. In this context, fishers accept relatively low prices. This creates a high degree of dependency between social actors, especially between permit holders and fishers (Coronado et al., 2020). Presence of middlemen and lack of direct access to markets affect the income and generates unbalanced economic equity distribution of the benefits of the fishing activity. In the production chain, the middlemen, locally known as "Pacotilleros", generally participate informally in several activities across the marketing chain, either through the purchase of products at the fishing port, the sale of products to fish processing plants, or the direct distribution to restaurants and hotels. This group plays an important role in market diversification, although it also contributes to informality in the extraction processes and in the sale of fishery products (Cepeda-Fernández & Salas, 2021).

Lack of infrastructure and equipment

The lack of investment in fishing infrastructure, such as a suitable dock and warehouses with modern equipment, has limited the ability of the region's artisanal fishers to carry out their activities of catching, storing, and processing fish products more efficiently. This undoubtedly affects their productivity and competitiveness in the market. This was more evident during the pandemic period.

Limited access to formal credit financing

Difficulty in accessing fair credit financing is an obstacle to improving fishing operations. This has particularly affected artisanal fishers who lack the resources to invest in technological improvements or diversify their activities to supplement their family income. Some government programs that existed before having been eliminated in recent years reducing alternatives for fishers.

Social, economic, and environmental vulnerability

The artisanal fishing community of Dzilam de Bravo is particularly vulnerable to several environmental, social and economic stressors (red tides, hurricanes, increase in input costs, illegal fishing, Covid-19). These events have significantly affected the fishers and their livelihoods, highlighting social injustices (Martínez-Torres, 2021). In addition, the lack of effective participation of artisanal fishers in policy formulation and decision-making at local and regional levels has often resulted in policies that do not reflect their needs and knowledge.

Sources

- Bennett, A. (2017). The influence of neoliberalization on the success and failure of fishing cooperatives in contemporary small-scale fishing communities: A case study from Yucatán, Mexico. *Marine Policy*, 80, 96-106. <https://doi.org/10.1016/j.marpol.2016.06.024>
- CeDePesca. (2014). Mexico Yucatan red and black grouper – longline. Consulted: December 30, 2023: <https://fisheryprogress.org/fip-profile/mexico-yucatan-red-and-black-grouper-longline>
- Cepeda-Fernández, M.F., S. Salas. (2021). Pesca Artesanal de la Península de Yucatán. Problemática de Cadenas Productivas de Recursos Pesqueros. Cinvestav-UNAM-EPOMEX-UAC. 50 p. isbn 978-607-8444-65-6 de la Colección, isbn 978-607-8444-30-4 del Volumen, <https://doi.org/10.26359/EPOMEX.0321>
- Cinner, J. E., McClanahan, T. R., Graham, N. A., Daw, T. M., Maina, J., Stead, S. M., Wamukota, A., Brown, K., Bodin, Ö. (2012). Vulnerability of coastal communities to key impacts of climate change on coral reef fisheries. *Global Environmental Change*, 22(1), 12-20. <https://doi.org/10.1016/j.gloenvcha.2011.09.018>

Justice in context

Sources

- COBI. (2019). Mexico Yucatan Octopus – drift rod an line (Alianza por el pulpo de Yucatán). Consulted: December 30, 2023: <https://fisheryprogress.org/fip-profile/mexico-yucatan-octopus-drift-rod-and-line>
- COBI. (2021). Las voces de la costa en la pandemia por COVID-19: Retos y soluciones de la pesca en pequeña escala. 53 p. Consulted: December 31, 2023: https://cobi.org.mx/wp-content/uploads/2022/03/6.-COBI_Las-voce-de-la-costa-en-la-pandemia-por-la-COVID19.pdf
- Coppa, S., Pronti, A., Massaro, G., Brundu, R., Camedda, A., Palazzo, L., Nobile, G., Pagliarino, G., de Lucia, G. A. (2021). Fishery management in a marine protected area with compliance gaps: socio-economic and biological insights as a first step on the path of sustainability. *Journal of Environmental Management*, 280, 111754. <https://doi.org/10.1016/j.jenvman.2020.111754>
- Coronado, E., Salas, S., Chuenpagdee, R. (2023). Análisis de manejo, gobernanza y gobernabilidad de la pesca de pequeña escala en el sur del Golfo de México. En preparación.
- Coronado, E., Salas, S., Torres-Irineo, E., Chuenpagdee, R. (2020). Disentangling the complexity of small-scale fisheries in coastal communities through a typology approach: The case study of the Yucatan Peninsula, Mexico. *Regional Studies in Marine Science*, 36, 101312. <https://doi.org/10.1016/j.rsma.2020.101312>
- Crespo-Guerrero, J. M., Jiménez-Pelcastre, A. (2022). Marginality and Resilience Strategies in Coastal Fishing Villages During the COVID-19 Pandemic in the State of Yucatan, Mexico. In *COVID-19 and Marginalisation of People and Places: Impacts, Responses and Observed Effects of COVID-19 on Geographical Marginality* (pp. 99-113). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-11139-6_8
- DOF. (2015). Plan de Manejo Pesquero de pepino de mar café (*Isostichopus badionotus*) y lápiz (*Holothuria floridana*) en la península de Yucatán. Consulted: December 18, 2023.
- EDF de México. (2021). El mercado de pescados y mariscos: sostenibilidad y seguridad alimentaria desde Yucatán. Consulted: December 29, 2023: <https://mexico.edf.org/blog/2022/04/11/el-mercado-de-pescados-y-mariscos-sostenibilidad-y-seguridad-alimentaria-desde>

Non-inclusion of marginalized groups

It is essential to ensure that marginalized groups, such as migrant fishers, who are part of the free fishers' group, have equal opportunities to formally participate in the activity. The active inclusion of these groups can contribute to a more equitable distribution of economic benefits related to exploited resources (Saldaña, 2019; Metcalfe et al., 2020), as well as a reduction in social conflict in the community.

Changes in the regulatory framework

In terms of infrastructure development, there is an ecological protection program for the Yucatan coast through the Yucatan Coastal Ecological Land Use Planning Program (POETCY), integrated in 2007. This instrument did not include the introduction of wind energy in any of the coastal municipalities in Yucatan, due to the fragility of their ecosystems (fragile karstic areas) (POETCY, 2007; Salas et al. 2023). However, in 2014, the Secretary of Urban Development and Environment modified the program to allow the installation of wind farms and other infrastructure, which has caused social and environmental impacts in Dzilam de Bravo. A plan for update has been announced but has yet to be developed.

The COVID-19 health contingency

This emergency highlighted the inequalities in access to public health services due to the lack of medical facilities and trained medical personnel. In addition, most people experienced difficulties in accessing health supplies. The economic impact of the emergency affected different segments of the population in different ways. Those whose income depended on economic activities affected by the restrictions, such as fishing, experienced greater financial difficulties. This was associated with falling prices, market closures, and disruptions in the marketing chain, leading to higher levels of social and economic vulnerability in the community (Lopez-Ercilla et al., 2021; Crespo-Guerrero & Jiménez-Pelcastre, 2022). The shift to distance learning created digital and educational divides due to technological gaps. Families with limited access to online technologies and services found it difficult for their children to continue their education during the pandemic, hence educational inequalities were evident. In terms of interventions and policies at the local level, it is suggested that governments should use all available resources to address the most pressing community issues to reduce vulnerability and achieve faster and more efficient social and economic recovery (Pedroza-Gutiérrez et al., 2021).

Definition of small-scale fisheries

The artisanal fisheries in Dzilam de Bravo is defined as a "multi-species artisanal fishery" characterized by a high spatio-temporal variation in landing locations, diversity of target species, gears, methods, biomass and economic yields (Salas et al., 2007; Salas et al., 2019a; Coronado et al., 2020).

Dealing with Justice

Sources

- Gamboa-Álvarez, M. Á., López-Rocha, J. A., Poot-López, G. R., Aguilar-Perera, A., Villegas-Hernández, H. (2020). Rise and decline of the sea cucumber fishery in Campeche Bank, Mexico. *Ocean & Coastal Management*, 184, 105011. <https://doi.org/10.1016/j.ocecoaman.2019.105011>
- Gamboa-Álvarez, M. Á., Soto-Vázquez, J. M., Poot-Salazar, A. V., Caña-Hernández, S., Chávez-Villegas, J. F., Pensamiento-Villarauz, S., Gutiérrez-Pérez, C., Rojas-González, R. I., & Aguilar-Perera, A. (2025). Evidence of illegal fishing of *Octopus maya* in the Campeche Bank, Southern Gulf of Mexico. *Marine Policy*, 179, 106767.
- Gobierno del Estado. (2023). Fuerte impulso del Gobernador Mauricio Vila Dosal a la actividad pesquera y turística de Dzilam de Bravo para elevar la economía de las familias. Consulted: December 31, 2023: https://www.yucatan.gob.mx/saladeprensa/ver_notas.php?id=7633
- Hernández-Padilla, J.C., Salas, S., Martínez-Torres, R., Ruíz-Gala, B., Cabrera, M.Á. (2022). Adaptive capacity, resilience, and socioeconomic impacts of extreme events on fishing communities. *Conferencia en el 4th World Small Fisheries Congress*, Mérida Yucatán.
- Laxe, F. G., Bermúdez, F. M., Palmero, F. M., Novo-Corti, I. (2018). Governance of the fishery industry: A new global context. *Ocean & Coastal Management*, 153, 33-45. <https://doi.org/10.1016/j.ocecoaman.2017.12.009>
- Lopez-Ercilla, I., Espinosa-Romero, M. J., Rivera-Melo, F. J. F., Fulton, S., Fernández, R., Torre, J., Amador, I. (2021). The voice of Mexican small-scale fishers in times of COVID-19: Impacts, responses, and digital divide. *Marine Policy*, 131, 104606. <https://doi.org/10.1016/j.marpol.2021.104606>
- López-Rocha, J. A., Velázquez-Abunader, I. (2019). Fast decline of the sea cucumber *Isostichopus badionotus* as a consequence of high exploitation in Yucatan, Mexico. *Regional Studies in Marine Science*, 27, 100547.
- Martínez-Torres, R. (2021). Vulnerabilidad socioeconómica y capacidad adaptativa de pescadores artesanales en Dzilam de Bravo, Yucatán. Tesis de maestría. Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional. 107 p.
- Metcalfe, S. E., Schmook, B., Boyd, D. S., De la Barreda-Bautista, B., Endfield, G. E., Mardero, S., Perea, A. (2020). Community perception, adaptation and resilience to extreme weather in the Yucatan Peninsula, Mexico. *Regional Environmental Change*, 20, 1-15. <https://doi.org/10.1007/s10113-020-01586-w>
- MSC. (2023). Estándar de Cadena de Custodia del MSC. Consulted: December 29, 2023: <https://www.msc.org/es/estandares-y-certificacion/los-estandares-de-msc/estandar-de-cadena-de-custodia-msc>

Unequal access to fishing resources

Since 2007 the limitation of licenses for new boats was established, however, these restrictions have not been well controlled; more boats have come into the coast and allocation of fishing rights is not totally clear. The exact number of boats is hard to estimate despite the Secretary of Sustainable Fisheries and Aquaculture (SEPASY) having conducted a census of boats along the entire coast of the state to assess and identify all coastal vessels operating in the area (SEPASY, 2023). Fishers are unclear about the specific guidelines to whom the licenses can be granted and what the requirements are; generally, those with more power seem to have more access to the new permits or renewal of older ones. They complain about the inequality, but due to the decline of important fishing resources it has become more difficult to access those permits.

Impacts on fishery resources

The State Security Committee of the State of Yucatan has agreed to increase air, sea and land surveillance activities to battle illegal fishing in the community, which is one of the main challenges to maintaining healthy stocks and the profitability of fisheries. From the academic side, the Centro de Investigación y de Estudios Avanzados (CINVESTAV-Unidad Mérida) has conducted interviews and community workshops to address sources of risk and vulnerability in coastal areas, including Dzilam de Bravo. Among the reported concerns of fishers stands out the need to address illegal fishing (Gamboa-Álvarez et al., 2025). The reports of the workshops have been distributed among local authorities and stakeholders in the community, aiming to help decision-makers to develop some strategies to face those challenges (Salas et al., 2023). From the community side, the inhabitants used to denounce illegal fishing practices, but today they no longer do so for fear of reprisals, which have occurred occasionally (Salas et al., 2023). Dealing with some of these stressors that affect their livelihoods; some fishers carry out activities related to tourism to supplement the family income (Martínez-Torres, 2021; Salas et al., 2023) and maintain the habit of saving as a preventive measure (Hernández-Padilla et al., 2022).

Several organizations of civil society, academic and government agencies, in addition to the fishing sector, have implemented some intervention programs leading to contribute with the recovery of one of the most iconic species in the fisheries in Yucatan. Among those interventions, the agreements between grouper producers, dealers and NGOs to implement a Fisheries Improvement Project (FIP) can be cited (CeDePesca, 2014; COBI, 2019). At the end of 2017, the Grouper Fisheries Management Advisory Committee was established, and a few months later, the Grouper Academic Network was established. In January 2019, the Secretary of Sustainable Fisheries and Aquaculture of Yucatan (SEPASY) was installed, and finally, in 2019, the State Fisheries Council, which had been inactive for many years, was reinstated. In the case of the sea cucumber fishery, a permanent closure was established in 2019 due to its collapse (DOF, 2015; López-Rocha & Velázquez-Abunader, 2019; Gamboa-Álvarez et al., 2020). Yucatan is one of the states where more collaboration exists among stakeholders addressing fisheries issues.

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Sources

- Pedroza, C., Salas, S. (2011). Responses of the fishing sector to transitional constraints: From reactive to proactive change, Yucatan fisheries in Mexico. *Marine Policy*, 35(1), 39-49. <https://doi.org/10.1016/j.marpol.2010.08.001>
- Pérez-Ramírez, M., Castrejón, M., Gutiérrez, N. L., Defeo, O. (2016). The Marine Stewardship Council certification in Latin America and the Caribbean: a review of experiences, potentials and pitfalls. *Fisheries Research*, 182, 50-58. <https://doi.org/10.1016/j.fishres.2015.11.007>
- POETCY. (2007). Programa de Ordenamiento Ecológico del Territorio Costero del estado de Yucatán. Consulted: December 25, 2023: https://acervo.yucatan.gob.mx/contenidos/Fase_III_Pronostico_Costero.pdf
- Salas, S., Chuenpagdee, R., Seijo, J. C., Charles, A. (2007). Challenges in the assessment and management of small-scale fisheries in Latin America and the Caribbean. *Fisheries Research*, 87(1), 5-16. <https://doi.org/10.1016/j.fishres.2007.06.015>.
- Salas, S., Torres-Irineo, E., Coronado, E. (2019a). Towards a métier-based assessment and management approach for mixed fisheries in Southeastern Mexico. *Marine Policy*, 103, 148-159. <https://doi.org/10.1016/j.marpol.2019.02.040>
- Salas S., Chuenpagdee R., Barragán-Paladines MJ. (2019b). Drivers and Prospects for the Sustainability and Viability of Small-Scale Fisheries in Latin America and the Caribbean. Pp. 543-560. In: Salas S., Barragán-Paladines MJ, Chuenpagdee R. 2019. *Viability and Sustainability of Small-Scale Fisheries in Latin America and the Caribbean*. MARE Publication Series. Springer
- Salas, S., Núñez, A., Cepeda-González, M.F., Ramos-Miranda, J., Cabrera, M.Á., Coronado, E., López-Rocha, J.A., Torres-Irineo, E. (2022). Pesca Artesanal en la Península de Yucatán. Contexto socio-económico y bienestar comunitario. *cinvestav-unam-epomex-uac*. Universidad Autónoma de Campeche. 55 p.
- Salas, S. Juan Carlos Hernández-Padilla, Miguel Á. Cabrera, Paulina V. Guarneros-Narváez, Daniel R. Quijano-Quiñonez, Fernanda N. Nava-Islas. (2023) Riesgos, vulnerabilidad y capacidad de respuesta en la comunidad de Dzilam de Bravo, Yucatán, México. Too Big To Ignore-CINVESTAV Workshop Report. Number R-04/2023. St. John's, NL, Canada, 42 p. toobigtoignore.net. [SS1]
- Saldaña, A. (2019). Vulnerability and viability of small-scale fisheries in Sisal, Yucatan, Mexico (MSc Thesis, Memorial University of Newfoundland). <https://research.library.mun.ca/13904/>
- SEPASY. (2023). Ordenamiento pesquero: Diagnóstico de embarcaciones y engomado. Consulted: December 29, 2023: <https://pesca.yucatan.gob.mx/secciones/ver/actividades> [SS1] Hay que revisar si esta ahí, mejor quitar la liga en su momento aparecerá en TBTI

Challenges in the marketing chain

The scientists emphasize the need to adopt adaptive strategies (proactive type) throughout the tracking of the production chain and improvement of resource management (Pedroza & Salas, 2011). The search for alternative markets through certification processes such as the MSC standard is considered a viable option for some fisheries, such as the octopus's fishery (Pérez-Ramírez et al., 2016). This fishery is currently undergoing a Fishery Improvement Project to meet the MSC certification standard, including the inclusion of the social components. These processes would make it possible to improve the status of some of the harvested populations. Similarly, according to the MSC (2023), fisheries that can comply with the MSC Chain of Custody Standard would guarantee the traceability of seafood products, which would increase consumer confidence and lead to higher prices. In this line, EDF de México worked with Seafood Business Solutions to develop the study "Hábitos del Consumidor de Pescados y Mariscos en Yucatán" (2021), aiming to provide a better understanding of fisheries complexity and how to build sustainable markets to contribute to food security in Yucatan (EDF de México, 2021).

Lack of infrastructure and equipment

At the local level, there is little investment from the government of Dzilam de Bravo to improve fishing infrastructure. However, Dzilam de Bravo is characterized as the municipality with the largest fishing infrastructure in the region, compared to municipalities such as Sisal and Rio Lagartos (Salas et al., 2022). In October of 2013 the state government, through the governor, delivered motors for small boats to promote fishing and tourism in the area, in addition to the support related to the "Peso a Peso Acuícola" program (Gobierno del Estado, 2023). No other initiative focused on improvement of infrastructure or equipment have occurred since then.

Limited access to formal credit financing

To expand access to credit for producers and companies in the agrifood and fishing sectors, the Fideicomisos Instituidos en Relación a la Agricultura (FIRA) and the Yucatan state government, through the Secretary of Rural Development, maintain the Financing program for medium-size agribusiness and rural enterprises (PROEM Yucatán). This program established a first-loss guarantee fund to promote the competitiveness of the region's medium-sized agrifood and fishing companies. With this program, fishery producers and entrepreneurs can supplement their guarantees to access different sources of financial support and have access to working capital loans for marketing, supply and storage, as well as long-term loans for the modernization and expansion of cold storage, equipment and processing areas in the industry. This program, however, is not available to all fishers, resulting in unbalanced benefits and inequity.

Dealing with Justice



As stated by Cinner et al. (2012), learning is a fundamental part of increasing the adaptive capacity of communities. In this line, Comunidad y Biodiversidad A. C. (COBI), also emphasizes the importance of sharing experiences through digital networks (COBI, 2021), especially now that fishers have become more willing to use technology on their daily lives like cellular phones, so that different solutions applied in other communities can set examples for communities in Yucatan like Dzilam de Bravo.



Changes in the regulatory framework

Local and state governments have not developed policies to control urban development in Yucatán's coastal zone. In fact, at the state level, it has been decided that infrastructure projects with foreign investment in Yucatan municipalities, especially in coastal municipalities, will be favoured. The government believes that projects of this kind can generate alternative jobs (at least temporarily) in the tourism sector, boost economic development and generate clean electric energy.

The COVID-19 health contingency

Several research studies have been conducted wherein it was identified that during the initial COVID-19 period (2020-2021), there were no changes in the contribution to the capture of the main commercially traded species in Dzilam de Bravo compared to the pre-COVID period (2019). However, there were discernible impacts on their contribution in terms of value. While the prices of red grouper were affected throughout the commercialization chain, in some other resources such as yellowtail snapper and lane snapper, prices were better during the pandemic period (2020 and 2021) in comparison to the pre-COVID period (Hernández-Padilla et al., 2022). Due to market closures, residents opted to implement proactive response measures (bartering between communities, product sales through social networks, value addition, alternative economic activities, saving, creation of support networks) to mitigate the impacts of the pandemic (Hernández-Padilla et al., 2022). Similarly, they also decided to implement reactive response measures such as waiting for government assistance and support from their fishing cooperatives (cash, food supplies, support from the BIENPESCA program). However, one strategy developed stands out in this community where fishers traded seafood for vegetables and other products coming from rural areas during the pandemic, showing a proactive response during the contingency (Salas et al., 2019b). The lesson learned from these findings is that people can respond if given the means to do so, but they also need government support to face challenges, hence the creation of a contingency plan to face extreme events and other stressors becomes more relevant nowadays.

How to cite

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Photo: Landings at the Port of Dzilam de Bravo. 2017. © Miguel Á. Cabrera

