

Challenge of Global Tuna Fisheries

List of Acronyms

ABNJ Areas beyond national jurisdiction
CCSBT Commission for the Conservation of Southern Bluefin Tuna
DWF Distant water fisher or fleet
DWFN Distant water fishing nation
EEZ Exclusive economic zone
FFA Foreign fishing arrangement
FPA Fisheries partnership agreement
IATTC Inter-American Tropical Tuna Commission
ICCAT International Commission for the Conservation of Atlantic Tunas
IOTC Indian Ocean Tuna Commission
JV Joint venture
PICs Pacific Island Countries
PNA Parties to the Nauru Agreement
RFMO Regional fishery management organization
TIFS Trade in fishing services
WCPFC Western and Central Pacific Fisheries Commission
WCPO Western and Central Pacific Ocean

Tuna is among the top seafood imports to the United States, surpassed only by salmon and shrimp. (<http://www.st.nmfs.noaa.gov/commercial-fisheries/foreign-trade/index>) Tuna species represent 16% of the value of all marine capture fisheries in the world, according to FAO, and are caught in the Atlantic, Indian, and Pacific Oceans and in the Mediterranean Sea. (<http://www.fao.org/in-action/commonoceans/projects/tuna-biodiversity/en/>).

Nations fish for tuna in their own EEZs, in waters offshore of their EEZs, on the high seas, and in distant waters not adjacent to flag state coasts. Landings from “distant waters” refer here to quantities taken by vessels in all FAO major fishing areas other than those adjacent to the flag state’s EEZ. (<http://firms.fao.org/firms/fishery/459/en>) These can include ocean areas under the jurisdiction of tuna RFMOs, including high seas, and ocean areas within the EEZs of another nation, accessed via a Foreign Fishing Arrangement (FFA) or Trade in Fishing Services (TIF) agreement. (Gillett 2016, International Bank 2014).

More than 40 species of tuna are harvested by 85 nations, using all types of access agreements and fishing gear. (<http://www.fao.org/docrep/017/ap939e/ap939e.pdf>) Table [X] provides a summary of tuna fishing and some examples of these arrangements. Although Russia, Japan, and Spain have been at times the largest DWF nations, China’s DWF fleet is now the world’s largest in terms of numbers of vessels. In addition to its own high seas and EEZ tuna fisheries, it is a member of four of the five t-RFMOs, and fishes under 14 bi-lateral agreements 7 interagency agreements and has DWF fleets active in countries throughout Asia, Africa, and Oceania. (Mallory 2014)

The t-RFMOs develop management measures and the member nations perform monitoring, compliance, and surveillance for their fleets. (Allen 2010, FAO-FI) Three of the t-

RFMOs have marine mammal conservation measures, and others have reporting requirements either through logbooks or observers. (Gillman 2011)

Industrial tuna fisheries are dynamic in response to market, stock, and ocean conditions, and can move quickly from the Atlantic to the Pacific or Indian Oceans. (FAO-FI) The Indian Ocean (Anderson 2014) and the waters of Pacific Island nations are areas of most recent growth (Gillett 2016). Because tuna RFMOs have not adopted management measures related to the level of bycatch of marine mammals in tuna fisheries—with the exception of fisheries in the Eastern Tropical Pacific overseen by IATTC—the extent and potential effects of interactions are uncertain, and may be significantly underestimated. (Clark 2014, FAO 2010, Van der Elst, RP and BI Everett 2015, Anderson 2014).

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Area	Gear	Major Flag States	Target species	Fishing area jurisdiction	Other agreements
Northeast Pacific Ocean	L	Japan, Taiwan Province of China	ALB, BET	EEZ	China bilateral with Japan, South Korea.
	T	Canada, US	ALB	EEZ	US/Canada Bilateral
Eastern Pacific	S	Costa Rica, Columbia, Ecuador, Mexico, Panama, Peru, Spain Vanuatu, Venezuela, US	SKJ, BET, YFT	EEZs, IATTC	
	L	Japan, Republic of Korea, US, Taiwan Province of China	ALB, BET, YFT	EEZs, IATTC	
Western, Central and South Pacific	L	China, Japan, Papua New Guinea, Philippines, Republic of Korea, Taiwan Province of China, Vanuatu	ALB, BET, YFT, SBF	EEZs, WCPFC, CCSBT	China bilateral with Vietnam; Japan/Taiwan bilateral; EU/Philippines deal in draft; US, EU, Taiwan, Korea, China, Japan, Philippines have access agreements to fish in EEZs of parties to Nauru Agreement.
	P	Japan	SKJ, ALB, YFT	EEZ	
	S	Indonesia, Japan, New Zealand, Papua New Guinea, Philippines, Republic of Korea, Taiwan Province of China, US	SKJ, BET, YFT	EEZs, WCPFC	
Eastern Indian Ocean	L	Belize, China, Honduras, Indonesia, Japan, Panama, Republic of Korea, Taiwan Province of China	ALB, BET, SBF, YFT	EEZs, IOTC, CCSBT	
	S	Indonesia, Japan, Liberia	SKJ, YFT	EEZs, IOTC	
Western and Central Indian Ocean	G	India, Indonesia, Iran, Maldives, Sri Lanka	SKJ, YFT	EEZs, IOTC	EU agreements provide access to EEZs of Mauritius, Seychelles, Comoros, Madagascar
	L	China, Belize, Honduras, India, Indonesia, Japan, Panama, Republic of Korea, Reunion, Seychelles, Taiwan Province of China, Thailand	BET, YFT	EEZs, IOTC	
	P	Maldives and Sri Lanka	SKJ, YFT	EEZs, IOTC	
	S	Belize, France, Japan, Seychelles, Spain	SKJ, YFT	EEZs, IOTC	
Eastern Atlantic	L	Belize, China, Honduras, Iceland, Ireland, Japan, Panama, Philippines, Portugal, Republic of Korea, Taiwan Province of China, Spain	ALB, BET, ABF, YFT	EEZs, ICCAT	EU agreements provide access to EEZs of Morocco, Mauritania, Senegal, Guinea-Bissau, Liberia, Cote d'Ivoire, Sao Tome, Principe, Gabon.
	P	France, Ghana, Namibia, Panama, Portugal, Republic of Korea, Senegal, South Africa, Spain	ALB, BET, SKJ, YFT	EEZs	
	S	Cote d'Ivoire, France, Ghana, Morocco, Portugal, Spain, Senegal, Vanuatu	BET, SKJ, YFT		
	T	France, Ireland, Spain	ALB	EEZs, ICCAT	
Western Atlantic	L	Brazil, Japan, Spain, Taiwan Province of China, US, Uruguay, Venezuela	ALB, ABF, YFT	EEZs, ICCAT	EU agreements provide access to EEZ of Greenland
	P	Brazil, Japan, Taiwan Province of China, Venezuela	SKJ	ICCAT, EEZs	
	S	Brazil, Venezuela	SKJ, YFT	EEZs	
Western & Central Atlantic	L	China, Japan, Portugal, Spain, Taiwan Province of China, US	BET, ABF	ICCAT	
Western Mediterranean	G	Morocco	ABF	EEZ, ICCAT	
	L	Cyprus, Greece, Italy, Japan, Libya, Spain, Taiwan Province of China	ABF	EEZs, ICCAT	

	S	Algeria, France, Italy, Spain, Tunisia	ABF	EEZs, ICCAT	
	H	Morocco, Spain	ABF	EEZs, ICCAT	
Central Mediterranean	S	Croatia, Italy	ABF	EEZs, ICCAT	
	L	Cyprus, Italy	ABF, ALB	EEZs, ICCAT	
Eastern Mediterranean	L	Greece	ABF	EEZs, ICCAT	
	S	Turkey	ABV	EEZs, ICCAT	

Table Sources: <https://www.iucn.org/content/parties-nauru-agreement-pna-interview-maurice-brownjon>, https://ec.europa.eu/fisheries/cfp/international/agreements_en, Mallory 2014, <https://iea.uoregon.edu/>, <http://firms.fao.org/firms/fishery/459/en>

Key to abbreviations in Table

Gear type

- G: Gillnet
- L: Longline
- P: Pole-and-line
- S: Purse seine
- T: Troll

- ABF: Atlantic bluefin
- ALB: Albacore
- BET: Bigeye
- SBF: Southern Bluefin
- SKJ: Skipjack
- YFT: Yellowfin