

15 Motivators for IUU fishing in the Indo-Pacific

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Introduction

Maritime crimes are prevalent throughout the Indo-Pacific and include trafficking of people, weapons and drugs, piracy, armed robbery at sea and environmental and natural resource crimes.¹ Fisheries crimes are one example of these activities that plague the Indo-Pacific region negatively, affecting economies and marine environments as well as placing at risk human and food security.² Illegal, unreported and unregulated (IUU) fishing includes a range of offences:

- Contravention of domestic and regional fishery management organisation (RFMO) laws;
- Non-reporting, misreporting or under-reporting of catches and failure to report other relevant matters not strictly required by law but that are advisable;
- Undertaking activities that States have not regulated; and
- Activities of stateless vessels and non-parties to RFMOs.³

1 For a general discussion of maritime security issues in the region see David Michel and Ricky Passarelli (eds), *Sea Change: Evolving Maritime Geopolitics in the Indo-Pacific Region* (Stimson Center 2014). Other commentators also confirm an expansion of maritime crimes in the region: Joon Num Mak, 'NGOs, Piracy and Maritime Crime in South East Asia' (2013) 228 *Asia Pacific Bulletin* 1-2; Tim Lynch, 'Illegal, Unreported, Unregulated Fishing, and The Universal Fisherman', (May-June 2007) *Maritime Studies* 20-23.

2 Agnew et al. demonstrate an expansion of IUU fishing in the Eastern Indian and North West Pacific areas: David J Agnew, J Pearce, G Pramod, T Peatman, R Watson, JR Beddington and T J Pitcher, 'Estimating the Worldwide Extent of Illegal Fishing' (2009) 4(2) *PLoS ONE* e4570. doi:10.1371/journal.pone.0004570, 2. They also confirm the significant damage that IUU fishing can do to species as well as collateral damage to ecosystems: *ibid.* 4, 5.

3 FAO, *State of the World's Fishers and Aquaculture: Contributing to Food Security and Nutrition for All* (FAO 2016), 97. For a detailed definition see FAO, *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)*, adopted 23 June 2001 at the 120th Session of the FAO Council, para 3.

IUU fishing predominantly operates out of sight and is therefore difficult to quantify, but research estimates that up to 26 million tonnes of fish are caught illicitly each year, equating to more than 15 per cent of the world's capture fisheries.⁴ Other reports estimate total economic losses between US\$10 and US\$23.5 billion per year.⁵ In 2015, the World Wildlife Fund reported that over 85 per cent of global fish stocks are at significant risk of IUU fishing.⁶ Beyond the financial loss, the marine environments, and fish stocks within them, are at serious risk of permanent damage. Calculating maximum sustainable yields and safe catch limits of highly mobile species, such as fish, is challenging in any regulatory environment. Where some actors are operating outside the law, and illicit catches are not included in catch data, stock estimates are likely to be exaggerated and overfishing, as well as the collapse of fisheries, becomes a very real possibility. Therefore, enhanced law, policy and management responses are needed to prevent those risks being realised. This is critical in the Indo-Pacific region where people and economies are dependent upon fisheries and as noted above, maritime crimes are prevalent.⁷ Although the international and regional communities have regulated to address IUU fishing, existing research indicates that the region is facing ongoing fishing-based crimes potentially exposing it to other more serious crimes.⁸ Therefore, enhanced regulatory responses must be developed, but before doing so the underlying drivers for this behaviour need to be explored. This research exposes critical motivators for the criminal activities which in turn can inform regulatory responses.

The specific regional context is also relevant in addressing the challenge of IUU fishing. The Indo-Pacific region is vast, encompassing continental countries and island states dotted within wide expanses of ocean. Each nation differs from the next in size, population, development status, socio-cultural and politico-legal environments, as well as the size of the maritime zones over which each have jurisdiction.⁹ Given this lack of homogeneity, motivations to respond to IUU

fishing, and commit often scarce resources, also vary widely. Drivers such as the desire to protect against broader maritime security threats and to facilitate the blue economy agenda play an important role in encouraging responses, though disproportionately. Greater understanding of what motivates governments and regulators can be valuable in devising better solutions and maximising uptake at the national level.

This paper applies crime opportunity theory to the complex challenge of IUU fishing. In doing so the purpose is not to de-value existing law and policy responses, nor to identify replacements for them. The aim is to shed light on why these responses have failed to have optimal effect. A further goal is to show that the application of criminological theory, rather than legal doctrinal or regulatory theory, has value and thus the significance of inter-disciplinary approaches to natural resource challenges is demonstrated. Furthermore, this paper explores drivers for State responses to IUU fishing, the analysis of which remains important if greater support is to be obtained for existing international and regional law and uptake at the national level.

Background

Legal responses to maritime crimes have largely been in the form of reactive laws¹⁰ that address 'symptoms rather than the root causes' of the problem.¹¹ The foundation for such responses is the law of the sea. Oceans governance has at its core the United Nations Convention on the Law of the Sea (UNCLOS), which establishes maritime zones, codifies prohibitions on piracy and enforcement options, such as hot pursuit, as well as creating general obligations to protect and preserve the marine environment.¹² UNCLOS introduced concepts such as 'maximum sustainable yield' and 'total allowable catch' in an effort to prevent overfishing, but detailed fisheries management was encouraged at the sub-global level through regional fisheries management organisations (RFMOs), combined with some specific instruments such as the Fish Stocks Agreement¹³ in relation to straddling and highly migratory stocks. The role of RFMOs varies depending on their establishing instrument, but may involve setting catch and fishing limits,

4 Ibid. iii.

5 Agnew et al. (n 2), 4.

6 World Wildlife Fund, 'Illegal Fishing: Which Fish Species Are at Highest Risk from Illegal and Unreported Fishing?' (WWF October 2015). <http://assets.worldwildlife.org/publications/834/files/original/Fish_Species_at_Highest_Risk_from_IUU_Fishing_WWF_FINAL.pdf> 1446130921>.

7 United Nations Office on Drugs and Crime, *Transnational Organized Crime in the Pacific: A Threat Assessment* (UNODC 2016). <www.unodc.org/documents/southeastasiandpacific/Publications/2016/2016.09.16_TOCTA_Pacific_web.pdf>, 10.

8 See, for example, Judy Furt and Katherine Anderson, *A National Study of Crime in the Australian Fishing Industry* (Australian Institute of Criminology 2007).

9 For example, India and China are vast countries with large populations and economies in transition. Australia is a developed nation but given its large Exclusive Economic Zone (EEZ), is still challenged in monitoring its waters. Many other nations are Small Islands Developing States (SIDS) such as Fiji, Samoa, the Maldives and Seychelles, with countries such as Vanuatu being amongst the least developed in the world. Many such States have much larger EEZs than land-based territory. Under the UN Convention Law of the Sea the coastal State has sovereignty

over the first 12 nautical miles of ocean, called the territorial sea. From 12 to 200 nautical miles is the EEZ over which the coastal State has sovereign rights to explore and exploit living resources including fish stocks.

10 Joe McNulty, 'Western and Central Pacific Ocean Fisheries and the Opportunities for Transnational Organised Crime: Monitoring, Control and Surveillance (MCS) Operation Kurukuru' (2013) 5(4) *Australian Journal of Maritime and Ocean Affairs* 145-152, 146.

11 Mak (n 1) 1.

12 United Nations Convention on the Law of the Sea, 10 December 1982, 1833 UNTS 3, 21 ILM 1261 (1982), entered into force 16 November 1994.

13 UN, *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, New York, 24 July 1995 (A/CONF.164/37).

adopting technical and conservation measures, as well as facilitating cooperative and governance arrangements between Member States to enable effective control and management of fisheries within that region.¹⁴ Measures adopted by REMOs are usually binding on Member States, but these countries do not always align with those fishing in the region. Other cooperative arrangements exist outside REMOs and are sometimes focused on specific issues such as cooperation, monitoring and enforcement.¹⁵ Together, these legal frameworks, and the national laws that implement them, address both species-based and area-based measures: licensing of fishing vessels, establishment of catch limits, protection of endangered species and closure of certain seasons and waters. Fisheries crimes are not normally a significant part of such regimes.

UNCLOS does not mention IUU fishing specifically. At the global level the FAO has taken the lead in addressing the problem under its mandate of eliminating food insecurity. The legal responses adopted by the FAO include 'soft law' at the international level with binding regulation mostly left to national governments to adopt at the domestic level; but again there has been little focus on criminal activities.¹⁶ The most specific instrument is the FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). It takes into account the special situation of developing countries (a matter of significant relevance to the Indo-Pacific) and includes principles such as the underlying goal of conservation and sustainable use of living natural resources, the necessity for comprehensive and integrated approaches, the use of phased implementation, as well as principles of transparency, non-discrimination, participation and coordination. It encourages flag, coastal, port and market states to adopt national plans of action that implement the IPOA-IUU and to work through appropriate REMOs to prevent, deter and eliminate the problem.¹⁷ Beyond its aim of eliminating illegal fishing, the IPOA-IUU does not address fisheries crime in a comprehensive way. Reference is made

to the adoption of legislation that makes it a 'violation' to conduct a business or trade in IUU fishing products and that States should adopt measures to prohibit landings and transshipments of IUU fishing catches, but no recommended suite of criminal law options is included. Approaches at the international level are largely restricted to market- and trade-related measures.

IUU fishing is an issue significant enough to warrant global concern but the responses to date including those outlined above have not resulted in its elimination. When coupled with increasing involvement of transnational organised crime, and taking into account the environmental degradation and socio-economic harm it can cause, the need for enhanced and more effective responses is magnified. It is in this context that new perspectives and approaches must be explored.

Crime opportunity theory

There is little doubt that some IUU fishing is undertaken by otherwise legitimate fishers, but given that it is a low risk and high gain activity, increasingly it attracts transnational organised criminals as well.¹⁸ IUU fishing is enabled by other criminal activities such as corruption, document fraud and money laundering and occurs alongside tax crimes, drug and people trafficking, forced labour and wildlife crime.¹⁹ As McNulty has noted, this context provides a 'rich smorgasbord of opportunities for transnational organised crime to thrive and prosper'.²⁰ Every Indo-Pacific nation is a regional stakeholder and must play a role in keeping ocean areas free from criminal activity. Yet, existing laws, regulatory approaches and policing strategies have not been successful in reducing the scale of the problem. Therefore, ways must be identified to overcome obstacles that hinder the achievement of more positive outcomes and criminological theory is applied here with this aim.

Crime opportunity theory provides a valuable lens through which to explore the most effective methods and coordinated responses to control IUU fishing within the Indo-Pacific because it exposes underlying drivers. Crime opportunity theory provides that when there is a low risk of apprehension and opportunity for high gain, combined with a motivated offender and suitable environment, the likelihood of offending increases.²¹ As with any criminological theory, the usefulness of crime opportunity theory may be challenged in the context of certain crimes or types of offending. Commonly, crime opportunity theory is

14 Organisation for Economic Co-operation and Development, *Fishing For Development – Background Paper For Session 5: The Role Of Regional Fisheries Management Organisations (RFMOs)*, (TAD/FI(2014)11), (OECD 2014) <www.oecd.org/tad/events/fishing-for-development-2014-session-5-RFMOs.pdf>, para 25.

15 *New Treaty on Cooperation in Fisheries Surveillance and Law Enforcement in the South Pacific Region*, 9 July 1992, 32 ILM 1238 (1993), entered into force 20 May 1993.

16 For example, FAO 'Code of Conduct for Responsible Fisheries', adopted at the 28th Session of the FAO Conference, Rome, 31 October 1995. See also FAO, 'Agreement to Promote Compliance with International Conservation and Management Measure by Fishing Vessels on the High Seas', adopted at the 27th Session of the FAO Conference, 24 November 1993.

17 FAO, 'International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU)', adopted 23 June 2001 at the 120th Session of the FAO Council. For a critique of the IPOA-IUU and its implementation see May Ann Palma 'Combating IUU Fishing: International Legal Developments' in Quentin Hanich and Martin Tsamenyi (eds) *Navigating Pacific Fisheries: Legal and Policy Trends in the Implementation of International Fisheries Instruments in the Western Central Pacific Region* (ANCOCS 2009) 71–103.

18 United Nations Office on Drugs and Crime, *Transnational Organized Crime In The Fishing Industry Focus on: Trafficking in Persons Smuggling of Migrants Illicit Drugs Trafficking* (UNODC 2011).

19 United Nations Office on Drugs and Crime, *Fisheries Crime* (UNODC 2016) <www.unodc.org/documents/about-unodc/Campaigns/Fisheries/Fisheries_Leaflet_PRINT.pdf>, 3–4.

20 McNulty (n.10) 146.

21 Ronald V Clarke 'Opportunity Makes the Thief. Really? And So What?' (2012) 1 *Crime Science: An Interdisciplinary Journal* 3.

tested against property crime, however, it has been used to explain various others, such as agricultural crime, organised crime, white collar crime and domestic violence.²² Crime opportunity theory is well placed to explain IUU fishing, as it is useful in deconstructing elements that contribute to the reasons why offending occurs in a certain setting.

The rationale for the use of crime opportunity theory within this paper is to explain how the motivations of offenders, combined with other situational factors, expose the Indo-Pacific to maritime crimes and inform enhanced responses to IUU fishing. Environmental criminologists seek to understand why wrongdoing occurs in certain spaces by critically analysing crimes against relevant theory.²³ Although academic and government attention has been paid to legal and regulatory frameworks, little inter-disciplinary analyses have been undertaken that apply criminological theory to enhance the effectiveness of responses to IUU fishing. Explaining IUU fishing through crime opportunity theory and adopting responses to address gaps may therefore have a collateral effect on other crimes in the region.²⁴ For example, addressing the intentional and deceptive failure to adequately license vessels and to fish in restricted areas and for protected species, as well as the use of outlawed fishing gear and equipment, could have the effect of reducing unrelated maritime crimes that cause environmental harms and/or help weaken criminal networks engaged in the trade of other illicit products. Crime opportunity theory pioneer, Ronald Clarke determined that

[p]eople without pre-existing dispositions [to crime] can be drawn into criminal behaviour by a proliferation of criminal opportunities, and generally law-abiding people can be drawn into committing specific forms of crime if they regularly encounter easy opportunities for these crimes, especially in their occupations.²⁵

22 See, for example, Daniel P. Mears, Michelle L. Scott and Avinash S. Bhati, 'Opportunity Theory and Agricultural Crime Victimization' (2007) 72(2) *Rural Sociology* 151-184; Edward R. Kleemans and Christianne J. de Poot, 'Criminal Careers in Organized Crime and Social Opportunity Structure' (2008) 5(1) *European Journal of Criminology* 69-98; Michael L. Benson, Tamara D. Madensen and John E. Eck 'White-Collar Crime from an Opportunity Perspective' in Sally S. Simpson and David Weisburd (eds) *The Criminology of White-Collar Crime* (Springer 2009) 175-193; Rob I. Guerette and Shannon A. Santana 'Explaining Victim Self-Protective Behavior Effects on Crime Incident Outcomes: A Test of Opportunity Theory' (2010) 56(2) *Crime and Delinquency* 198-226.

23 See, for example, Gohar A. Petrossian, 'Preventing Illegal, Unreported and Unregulated (IUU) Fishing: A Situational Approach', (2015) 189 *Biological Conservation* 39-48; Richard Wortley, Lorraine Mazerolle and Sacha Rombouts (eds) *Environmental Criminology and Crime Analysis* (Taylor & Francis 2008).

24 Marcus Felton and Ronald V. Clarke, *Opportunity Makes the Thief: Practical Theory for Crime Prevention*, Police Research Series Paper 98, (Home Office Policing and Reducing Crime Unit 1998) 30.

25 Ronald V. Clarke, 'Opportunity Makes the Thief. Really? And So What?' (2012) 1 *Crime Science: An Interdisciplinary Journal* 3.

Whilst this might explain some IUU fishing, evidence has emerged of the link between transnational organised crime and illegal fisheries; the scale and organisation of some of these enterprises is significant.²⁶ Criminal syndicates may have different motivations from opportunistic fishers. For example, with reducing supply and increasing demand and therefore higher prices for fish and seafood, criminals are motivated to engage in IUU fishing alongside other maritime criminal activities.²⁷ Again, by unpacking the motivators, better informed decisions can be made about legal responses.

The challenges of IUU fishing

As outlined above, IUU fishing encompasses illicit activities and those that are poorly managed, as well as activities and/or areas that are not regulated. Clearly, enhanced responses are needed and in some areas further regulation: for example, where there are gaps and unregulated areas and activities to be addressed. This chapter, however, focuses on fishing that violates, or at least disregards, existing international, regional and local fishing laws and regulations.

Applying crime opportunity theory, it can be seen that IUU fishing takes advantage of the vastness of the oceans and the hidden nature of activities which creates an environment where there is low risk of capture. Combined with this is the high market value of certain species. Although there is little solid data about which species are caught and in what proportions, analyses point to high value stocks, which may include lobster, shrimps, prawns, shark fin and blue fin tuna,²⁸ including low-volume resources such as abalone.²⁹ The high value of incidentally caught species, as well as the absence of guardianship at sea, and therefore the ability to yield additional catch without fear of sanction, may encourage IUU fishing. The difficulties of monitoring ocean activities and the market demand for certain species are not factors that law- and policy-makers can easily influence. Furthermore, even the best monitoring and enforcement focuses on the end result of IUU fishing, not its causes. Therefore, other elements articulated in crime opportunity theory, including factors that motivate offenders, must be explored.

Understanding the complex and many drivers for participation in IUU fishing is essential to developing a suitable response. The Pew Charitable Trusts note, '[i]llegal fishing is an economic crime driven by a growing world demand for fish and other seafood, and the globalization of the market'.³⁰ Criminals engage in IUU fishing for myriad reasons, but undoubtedly economic aims

26 United Nations Office on Drugs and Crime (n 18).

27 United Nations Office on Drugs and Crime (n 19), 3-4.

28 Agnew et al. (n 2) 3; McNulty (n 10) 147.

29 United Nations Office on Drugs and Crime (n 18) 3.

30 Pew Charitable Trusts, FAQ: Illegal, Unreported, and Unregulated Fishing' <www.pewtrusts.org/~media/legacy/uploadedfiles/peg/publications/fact_sheet/iuufaqwebpdf.pdf> accessed 24 July 2018.

dominate.³¹ Much like other crimes, greed, ease and profitability, weak governance, poor monitoring and enforcement all reportedly contribute to IUU fishing.³²

A 2002 Australian Government report identified the following types of IUU fishers: the habitual or repeat offenders, the opportunists, and the ignorant.³³ While the majority of IUU fishers are organised criminals, some 'ignorant' or 'opportunistic' IUU fishers disregard the law to yield a larger catch or take advantage of regulatory gaps and poor law enforcement. Some IUU fishers are driven to do so as their livelihoods are under threat and they have few other economic opportunities.³⁴ Worst affected are destitute fishers and subsistence fishing communities heavily dependent on fishing for their livelihoods and as an important food source.³⁵ Historically, particularly for ignorant or opportunistic IUU fishers, when fish stocks were in abundance, illegal fishing was a low-risk, high-return activity. Even if caught, prosecution has been unlikely with low fines, compared to potential profits for selling illegally caught fish.³⁶ As fish stocks are coming under increasing pressure, greater attention has turned towards addressing these activities. In order to remove the motivation to offend it is therefore critical to improve weak governance, eradicate poverty, and provide sound economic policies including sustainable livelihood options.

Turning to the other group, it is most likely that 'habitual or repeat offenders' are highly organised.³⁷ Organised IUU fishers are more likely to deliberately target the vulnerable and most valuable species, and engage in other offences including 'environmental offences, theft, fraud, quarantine violation, tax evasion, and serious crime against people'.³⁸ Again, the solution must involve improved governance, as well as the eradication of corruption and underground economies.³⁹ International legal responses have sought to establish strong regulation, leading to sustainable and responsible fisheries. For example, flag, coastal, port and market state measures have been adopted in response to

declining fish stocks in many regions of the world.⁴⁰ But IUU fishing involves disregard for existing laws, regulations, boundaries and marine life, and as such it is reasonable to assume that highly organised offenders also have a disregard for other seafaring rules and international laws. For example, they may operate under open registries, often referred to as flags of convenience. Open registries often operate out of developing countries seeking to gain market share of foreign investment by offering advantages for their shipping services. By flagging a vessel to an open registry, a shipowner minimises its fees payable to charter the vessel, making it cheaper with fewer formalities than registering a vessel to a developed nation.⁴¹ Unscrupulous owners benefit from the anonymity provided by the open registry.⁴²

Regardless of whether the fishers have alternative options, the lack of consequences due to weak monitoring and enforcement coupled with high profits renders IUU fishing an appealing option for those who otherwise do not have employment or engage in even higher risk activities, such as maritime piracy.⁴³ In recent years, despite an escalation in global awareness and effort to control IUU fishing, transnational organised criminals take advantage of weak governance and poor law enforcement at port and sea borders to engage in these activities alongside other maritime crimes.⁴⁴

IUU fishing and transnational organised crime

It is clear that IUU fishing in the Indo-Pacific is a complex issue. While some illicit activities may be engaged in by otherwise legitimate fishers, the majority of IUU fishers are part of large transnational organised crime syndicates. Organised crime involves groups or syndicates acting in unison to commit serious crimes or offences for a material or financial benefit.⁴⁵ IUU fishing is a profitable, clandestine industry, with conditions that attract organised criminal syndicates. It is facilitated by the globalised nature of the fishing industry and freedom of the seas, which allows transnational mobility of vessels.⁴⁶ IUU fishing occurs alongside legitimate fisheries but relies on its organised illegitimate activities to enhance profitability and facilitate further criminal offending. IUU fishing 'entrepreneurs' take advantage of regions that lack effective governance, and where weak legal systems and few available resources exist to protect marine life or

31 Agnew et al. (n 2) 4; McNulty (n 10).

32 Teale N Phelps Bondaroff, Tuesday Reitano and Wietsse van der Werf, *The Illegal Fishing and Organized Crime Nexus: Illegal Fishing as Transnational Organized Crime* (The Global Initiative Against Transnational Organized Crime and The Black Fish 2015) 22. Agnew et al. found a particularly strong link between IUU fishing and poor governance: Agnew et al. (n 2) 4.

33 Victorian Parliament Environment and Natural Resources Committee, *Inquiry into Fisheries Management: Second Report* (Parliament of Victoria 2002) <www.parliament.vic.gov.au/images/stories/Reports/VPARL1999-2002No166.pdf>, 244.

34 Mak (n 1) 2; Phelps Bondaroff et al. (n 32) 62.

35 United Nations Office on Drugs and Crime (n 18).

36 Pew Charitable Trusts, 'FAQ: Illegal, Unreported, and Unregulated Fishing' <www.pewtrusts.org/en/research-and-analysis/fact-sheets/2013/08/27/faq-illegal-unreported-and-unregulated-fishing> accessed 24 July 2018.

37 Victorian Parliament Environment and Natural Resources Committee (n 33) 243-245.

38 Phelps Bondaroff et al. (n 32) 37.

39 Mak (n 1) 2.

40 FAO, 'Code of Conduct for Responsible Fisheries' (n 16); FAO 'Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing' (n 16).

41 Jade Lindley, *Somali Piracy: A Criminological Perspective* (Routledge 2016).

42 ITF Seafarers, 'Inside the Issues: Fisheries' <www.itfseafarers.org/ITI-fisheries.cfm> accessed 7 September 2016.

43 Phelps Bondaroff et al. (n 32) 24.

44 United Nations Office on Drugs and Crime (n 18).

45 McNulty (n 10) 145.

46 Ibid.

borders; they target species with high market value, resulting in low risk of law enforcement and very high rewards.⁴⁷

Transnational organised crime syndicates have 'structures, systems, communications, hierarchy and financial controls' around their operations.⁴⁸ Marine resources may be caught in the waters of one State, offloaded in another State or on the high seas, often for processing, exported to the market State and profits laundered to recipients in another State.⁴⁹ Furthermore, IUU fishing is often a cover for other illicit activities, frequently using the same routes, ports and corrupt border officials to evade interception.⁵⁰ Research suggests that frozen illegally caught fish may provide an effective cover to traffic other contraband, including wildlife and drugs.⁵¹ There is global awareness of these interconnections, but despite the United Nations General Assembly committee on fisheries management and conservation meeting semi-annually since 1991, they only articulated their concern about the link between IUU fishing and organised crime in 2008.⁵² Specifically, it noted:

[C]oncerns about possible connections between international organized crime and illegal fishing in certain regions of the world, and encourages States, including through the appropriate international forums and organizations, to study the causes and methods of and contributing factors to illegal fishing to increase knowledge and understanding of those possible connections, and to make the findings publicly available, bearing in mind the distinct legal regimes and remedies under international law applicable to illegal fishing and international organized crime.⁵³

This United Nations General Assembly Resolution clearly refers to the need to address the low risk of apprehension, but also recognises the importance of understanding underlying drivers. For example, reiterated in subsequent resolutions is the directive for 'States, in accordance with international law, to strengthen implementation of or, where they do not exist, adopt comprehensive monitoring, control and surveillance measures and compliance and enforcement schemes' to enhance the response to IUU fishing and related crimes.⁵⁴ Endorsed

by the United Nations General Assembly as an issue of great concern, Member States are charged with the responsibility to act and explore all motivators including those beyond poor governance, surveillance and enforcement.

The coexistence of IUU fishing and forced labour

Declining catches and therefore reduced profits means fishers and fishing companies seek out cost-cutting methods. A transnational organised crime requires a string of accomplices to facilitate it. In the first instance, IUU fishing requires a crew willing to fish for illegal catches. Invariably, the organised criminals do not undertake these activities themselves, but rather others, often trafficked onto the vessel, are forced to work for little or no money. Forced labour involves coercion to work through violence or intimidation, accumulated debt, retention of identity papers or threats to inform immigration authorities,⁵⁵ and often involves desperate people facing poverty being sold, smuggled or trafficked into working for long periods at sea. Because fishing vessels operate offshore, the slave labour aboard these vessels is difficult to monitor, just as IUU fishing is hidden.

This factor has emerged as a growing concern in IUU fishing over the last decade. Although abolished in the nineteenth century, slavery is still present in developing and developed countries in various forms.⁵⁶ Estimates reveal that 20 million people work in conditions involving coercion with around 68 per cent in forced labour.⁵⁷ Modern-day slavery involves restricted movement, control of personal belongings and lack of fully informed consent. Forced labour at sea involves workers who have no choices, no means of escape and must work under extreme conditions for little or no pay; this essentially amounts to slavery.⁵⁸

Forced and unpaid labour is often found alongside IUU fishing and therefore facilitates its existence. Fishers, generally migrants, may willingly agree to work aboard the vessel, however, the conditions they are exposed to daily defy international labour and human rights standards. In the Asia Pacific, the fishing sector accounts for 53 per cent of all forced labour in that region.⁵⁹ Extensive

55 International Labour Organization, 'The meanings of forced labour', March 2014 <www.ilo.org/global/topics/forced-labour/news/WCMS_237569/lang-en/index.htm>.

56 The Walk Free Foundation, 'Global Slavery Index 2014', (Hope for Children Organization Australia Ltd 2015) <www.walkfreefoundation.org/news/resource/the-global-slavery-index-2014/> accessed 24 July 2018

57 MBA Central 'The Business of Modern Day Slavery', <www.mbacentral.org/business-modern-day-slavery/> accessed 13 March 2016.

58 International Labour Organization, 'Forced Labour in Fishing: How Big is the Problem?' (International Labour Organization 2015) http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_429031/lang-en/index.htm; International Labour Organization 'Fishing and Aquaculture', (International Labour Organization 2012) http://www.ilo.org/ipcc/areas/Aquaculture/WCMS_172419/lang-en/index.htm.

59 Walk Free (n 56) 53.

47 Ibid. 146.

48 Ibid. 145.

49 United Nations Office on Drugs and Crime (n 18).

50 Ibid. 3.

51 UNODC (n 19), 11; Phelps Bondaroff et al. (n 32) 62.

52 United Nations General Assembly, 'Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and Related Instruments', A/RES/63/112 (5 December 2008), para 59.

53 Ibid. para 59.

54 Ibid. para 60.

global research provides countless examples of poor conditions.⁶⁰ The 2016 Global Slavery Index noted the

abuse of migrant workers on fishing vessels, often young men and boys, who have endured brutal treatment including physical abuse, excessive and inhumane working hours, sleep and food deprivation, forced use of methamphetamine, and face being thrown overboard if they become ill or injured.⁶¹

Workers kept at sea for years at a time support South East Asia's US\$7 billion annual exports fishing trade.⁶² Using low or unpaid workers ensure organised criminal leaders pocket greater profits, but it can also be a motivator in itself.

Again the international community has responded with the International Labour Organization adopting the Maritime Labour Convention in 2006. Although this treaty came into force in 2013 only 80 States have signed it and Indonesia, for example, is not amongst them.⁶³ The 2007 ILO Convention Concerning Work in the Fishing Sector (Work in Fishing Convention) sets standards for commercial fishing industry workers, but only attracted enough signatories to enter into force on 16 November 2017. Legal responses to IUU fishing can only be successful if a sufficient number of States adopt and implement them. This leads to the issue of what drives governments to respond to the enablers that facilitate IUU fishing.

Motivations of states in controlling IUU fishing

Whilst most States have adopted some form of fisheries regulation, responses to IUU fishing are more piecemeal, with fisheries crimes being particularly poorly legislated and enforced. Logistically, policing the Indo-Pacific is a monumental challenge for any one nation. Under UNCLOS, each littoral State is required to control activities in its territorial waters (up to 12 nautical miles from land) and exclusive economic zone (EEZ) (between 12 and 200 nautical miles).⁶⁴ Beyond these areas no one State has policing authority, in line with the freedom of the

high seas doctrine.⁶⁵ However, flag States are encouraged to work within RFMOs and cooperate through them in managing fisheries on the high seas.

As noted above, international efforts have largely been developed under the auspices of the FAO. The motivator in that regard is addressing food security with the FAO empowered to collect data and provide assistance to States to that end. The IPOA-IUU is a targeted instrument focused on addressing this specific problem. Its adoption and widespread endorsement demonstrates that States are motivated, but the translation into national plans of action and binding domestic legislation has been much poorer. At the domestic level each State within the Indo-Pacific has its own legal system and regulatory frameworks and these may or may not align with neighbouring states, making harmonised responses to the IPOA-IUU challenging. Again the international community has responded in an effort to provide more coordination. The FAO Port State Measures Agreement, which permits port States to monitor and seek compliance with fisheries regulations within national waters and on the high seas, has recently come into force having attracted sufficient signatories.⁶⁶ The endorsement of this document does indicate further support for harmonised regulatory measures, but by themselves these measures can only prevent landings of excess catch or prohibited species and do not identify where a species has been caught and therefore they can only ever address part of the problem.

In terms of regional fisheries management, a number of multilateral RFMOs operate in the Indo-Pacific. Despite some efforts to create a level of cohesion across the region, fragmentation between the States prevents seamless compliance with, for example, vessel registrations, tracking equipment, monitoring and enforcement. Each State in the region has varying political will, and motivations and levels of participation in counter-IUU fishing efforts.

Outside RFMOs there have been other collaborative responses to IUU fishing. For example, several Eastern Africa states bordering the Western Indian Ocean have developed a multilateral collaborative response, FISH-i Africa.⁶⁷ The marine resources in this region provide a vital source food and jobs, supporting local economies. Unsustainable activities motivated the collaborative response to protect the marine environment and economies destroyed by criminals who undermine legitimate industry.⁶⁸ The joint operation between the eight participating nations – Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and Tanzania – increases capability unachievable by each individual nation.⁶⁹ The FISH-i Africa task force progresses the goals of the collective, including information sharing. Task Force countries share information and

65 UNCLOS, Article 87.

66 As at 14 November 2016, the FAO Port State Measures Agreement had 47 signatories: FAO, 'Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, Adopted 22 November 2009 at the 36th Session (12/2009)' <www.fao.org/fileadmin/user_upload/legal/docs/037s-e.pdf>.

67 FISH-i Africa, *Why FISH-i Africa?* <www.fish-i-africa.org/about/why-fish-i-africa/>.

68 *Ibid.*

69 *Ibid.*

60 *Ibid.*; Environmental Justice Foundation, 'Seafood not slavefood' <<http://ejfoundation.org/campaigns/oceans/item/seafood-not-slavefoods>>.

61 Erika Techera and Jade Lindley, 'Curtailed Maritime Crime: Countries should look at multi-national approaches to regulating and limiting illegal fishing, trafficking, smuggling and other sea crimes' (Indo-Asia-Pacific Defense Forum, 5 December 2016) <<http://apdf-magazine.com/curtailing-maritime-crime/>>; Walk Free (n 56).

62 Esther Htusan and Margie Mason 'More than 2,000 Enslaved Fishermen Rescued in Six Months' (Associated Press, 17 September 2015) <<http://bigstory.ap.org/article/ceef8d4237e49b8fe59d47fa3515b0/more-2000-enslaved-fishermen-rescued-6-months>> accessed 24 July 2018.

63 International Labour Organization, 'Ratifications of Maritime Labour Convention 2006' <www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11300:0::NO::p11300_instrument_t_id:312331> 24 July 2018.

64 UNCLOS, Articles 3 and 57.

intelligence on flagged and licensed fishing vessels operating in their fishing zones and ports to help identify and intercept illegal operators.⁷⁰ The potential expansion of the program to include other Indo-Pacific nations is dependent on political will, effective working relations and territorial disputes between potential participants like Japan, China, Taiwan and Vietnam.⁷¹

The success in developing positive and effective working relationships is the first step to controlling IUU fishing. Some other bi- and multilateral relationships exist in the Indo-Pacific, in particular, between the United States and several small Pacific Islands.⁷² These collaborations are mutually beneficial to States involved, strengthening trading and security partnerships.⁷³ Once a regional platform is harnessed, options to trial innovative solutions to IUU fishing are possible. Further research is necessary to explore the viability and legal boundaries of using autonomous and remote unmanned technologies to monitor activities and gather data across thousands of square kilometres of high seas.

Motivators to respond to IUU fishing may depend on the perceived benefit for a participating State. As explored above, food security appears to be one such driver and opportunities provided by the blue economy is another significant motivator to participate. The blue economy concept involves balancing wealth that can be obtained from the oceans with protection and sustainable management of resources. Both consumptive and non-consumptive utilisation is envisaged combined with conservation. It has been said that '[t]he blue economy concept has the potential to act as a key driver of sustainable development and political stability through the Indo-Pacific region'⁷⁴ and indeed it has been incorporated into a number of politico-economic agenda. The Seychelles and Mauritius, for example, have both implemented marine policies based on the blue economy concept, which demonstrates its ability to potentially play a harmonising role and perhaps drive renewed efforts to address IUU fishing upon which it depends.⁷⁵

70 Ibid.

71 Natasha Howells, 'Can Seychelles Anti-Illegal Fishing Initiatives be Replicated Elsewhere?' (*Future Directions International*, 2 July 2014) <www.futuredirections.org.au/publication/can-seychelles-anti-illegal-fishing-initiatives-be-replicated-elsewhere/>

72 United States Department of State, 'U.S. Relations with Fiji' (*Bureau of East Asian and Pacific Affairs*, 9 February 2015) <www.state.gov/t/pa/ci/bgn/1834.htm>; James Hurdell, 'The Value of Ship Rider Agreements in the Pacific' (*Center for Strategic and International Studies*, 10 December 2014) <<http://cogitasia.com/the-value-of-ship-rider-agreements-in-the-pacific/>>; United States Department of State, 'U.S. Policy in the Pacific Islands' (29 September 2010) <<https://2009-2017.state.gov/p/eap/tls/rm/2010/09/148318.htm>>.

73 Ibid.

74 Anthony Bergin, 'Australia-Japan Cooperation in the Indian Ocean Blue Economy' paper presented at the National Security College Indo-Pacific Maritime Security Conference: Challenges & Cooperation <<http://docplayer.net/40121779-Australia-japan-cooperation-in-the-indian-ocean-blue-economy.html>>.

75 Ibid.

Analysis

Fisheries regulation operates to provide a foundation of rules and processes for legitimate fishers. It has been used as the predominant tool to address IUU fishing but has had a sub-optimal effect because it does not adequately address the high value of fish stocks (although some trade-based measures are in place), low risk (monitoring and criminal enforcement) or motivated offenders (what causes the person to engage in criminal activity). Increasing this type of regulation is unlikely to solve the problem and can have unintended consequences on subsistence and traditional fishing by introducing greater regulatory burdens. Furthermore, too much regulation can disincentivise compliance and therefore other levers must be found to address the issues.

Crime opportunity theory requires a motivated offender combined with high likelihood of reward and low risk of apprehension. An offender may be motivated primarily by economic gain, but also availability of other elements that support IUU fishing, in particular corruption and lax regulatory enforcement at several points along the supply chain. The ability to engage with corrupt officials may be a facilitating motivator for criminals. Most commonly, IUU fishing is enabled by vessels flagged to open registries, using the opportunity of transshipment, or mixing illegal with legal catches at sea, using ports of convenience, and tax havens.⁷⁶ Each of these methods intends to disregard or in some way evade controls in place that protect marine resources, promote fair market share and provide the relevant State with revenue. Not only must direct motivators be addressed but also facilitators of IUU fishing including forced labour and other issues explored in this chapter. It is clear though that there are other relevant enablers that have not yet been explored; for example, maritime insurers are not addressing IUU fishing and research indicates 'some IUU vessels are covered by marine insurance'.⁷⁷

The issue of low risk of apprehension is a very real one. This chapter identifies a number of challenges in achieving effective oceans monitoring, control, and surveillance, to ensure human and food security in the region including the vastness of the Indo-Pacific region. Furthermore, reliance on regional neighbours to coordinate responses can be difficult, given the different political contexts and relationships, economic drivers, presence of corruption, and weaknesses in governance including the rule of law.

Lucrative fishing grounds are accessible illegally and strengthened government efforts will provide protection for them. Improved and enhanced policing capabilities can be achieved by combining technology and regional cooperative arrangements to remotely monitor the vast region and reduce opportunities for clandestine offending. Further research is needed into these technologies. In

76 Bondaroff et al. (n 32) 3.

77 Dana Miller, U Rashid Sumaila, Duncan Copeland, Dirk Zeller, Boris Soyer, Theodora Nikaki, George Leloudas, Stig T Fjellberg, Rebecca Singleton and Daniel Pauly, 'Cutting a Lifeline to Maritime Crime: Marine Insurance and IUU fishing' (2016) 14(7) *Frontiers in Ecology and the Environment* 357-362.

addition, bi- and multilateral patrol arrangements, such as shiprider agreements, can also supplement capacity.

The high value that can be achieved for some protected stocks can be addressed in part by the Port State Measures Agreement that seeks to harmonise approaches to landings at different port facilities. Labelling and consumer awareness initiatives can also place pressure on illegitimate fisheries. Therefore, increasing transparency about maritime crimes among consumers, in particular IUU fishing, is essential to encourage informed choices and sustainable purchases.

Whilst some otherwise legitimate fishers may be engaged in IUU fishing and criminals engaging in fishing-based crimes are opportunistic, increasingly they are organised. What drives these people into fishery crimes? In part, it is the availability of other assets that enhance profitability including the availability of flags of convenience, and free and low cost labour. In particular, consideration should be given to peripheral risk factors on land and at sea that increase the likelihood of trafficking in persons and forced and low cost labour. Finally, further work is needed to better understand how transnational organised criminal syndicates facilitate IUU fishing and other enabling crimes (such as trafficking in persons) and what motivates them to do so.

Conclusion

IUU fishing occurs throughout the world but is particularly prevalent in the Indo-Pacific region where vast ocean areas, weak governance and lack of capacity hamper monitoring and enforcement. Fishing-based crime increases the vulnerability of species, placing pressure on the natural environment and ultimately food and economic security. Analysing IUU fishing from a theoretical viewpoint facilitates richer insights into ways in which it may be controlled. Crime opportunity theory has provided a useful lens through which to deconstruct motivators that encourage organised criminals to engage in IUU fishing.

This chapter has exposed drivers leading offenders to commit IUU fishing in the Indo-Pacific and peripheral issues that enable its continuation. Applying crime opportunity theory to bring a theoretical understanding to the causes can be useful in devising more effective responses adaptable across the region. In the long term though, developing specific regional solutions to the Indo-Pacific issues is likely to have the greatest permanent and sustainable benefit. Framing IUU fishing as a national security issue has gone some way in encouraging States to commit resources to the problem. However, as Rahman points out, there are limits to maritime cooperation in certain contexts.⁷⁸ He points to physical geography of the region being a challenge and although there are examples of

collaborative initiatives⁷⁹ maritime boundary disputes hamper joint enforcement arrangements.

The solutions appear to lie in multi-faceted responses.⁸⁰ It is clear that multiple legal frameworks address different aspects of IUU fishing across a number of sub-fields.⁸¹ The above analysis demonstrates that by applying crime opportunity theory it can be seen that there are an equal number of motivators to engage in IUU fishing, and in order to ensure the root causes are addressed, it is necessary to 'frame maritime crimes in a wider perspective'.⁸² Therefore, responses must be multi-faceted including improving governance, increasing cooperation and reducing economic incentives as well as removing enablers such as forced labour.

79 For example, the Southeast Asia Maritime Security Initiative: *ibid.* 42.

80 *Ibid.* 43, who points to the need for maritime security cooperation to be pursued on multiple paths.

81 For example, law of the sea, fisheries regulation, labour law, maritime and shipping regulation and environmental and natural resources law.

82 Mak (n 1) 2.

78 Chris Rahman, 'The Limits to Maritime Security Collaboration in the Indo-Pacific Region' paper presented at the National Security College Indo-Pacific Maritime Security Conference: Challenges & Cooperation <<http://ro.uow.edu.au/lhapapers/2887/>>.