

TITLE PAGE

Involving Local Fishing Communities in Policy Making: Addressing Illegal Fishing in Indonesia

Ioannis Chapsos¹ⁱ, Juliette Koningⁱⁱ, Math Noortmannⁱⁱⁱ

ⁱ Assistant Professor in Maritime Security, Centre for Trust, Peace & Social Relations, Coventry University, Innovation Village Building No. 5, Cheetah Road, Coventry CV1 2TL, United Kingdom. E-mail address: ioannis.chapsos@coventry.ac.uk

ⁱⁱ Professor in Organisational Studies, Director Research Centre for Business, Society and Global Challenges Oxford Brookes Business School, Oxford Brookes University. Headington Campus, Oxford OX3 0BP, United Kingdom. Email address: j.koning@brookes.ac.uk

ⁱⁱⁱ Professor of Transnational Law and Non-State Actors, Executive Director of the Academic Council on the United Nations System. Centre for Trust, Peace & Social Relations, Coventry University, Innovation Village Building No. 5, Cheetah Road, Coventry CV1 2TL, United Kingdom. Email address: math.noortmann@coventry.ac.uk

Funding: This work was supported by the ESRC/AHRC [Trans-National Organised Crime Call; Project Title: 'The Maritime dimension of transnational organized crime: Engaging Indonesian law enforcement agencies and coastal communities in the land-sea nexus; ESRC grant reference ES/P001289/1]; the British Council [Newton Fund Institutional Links; Project Title: Decreasing the vulnerability of Indonesia's fishing communities: Countering the threats of illegal and unsustainable fishing; grant reference: 261872695]

¹ Corresponding Author. E-mail address: ioannis.chapsos@coventry.ac.uk

Key findings / Highlights

- The knowledge and experiences of local fishing communities is too often ignored in national and international IUU fishing policies.
- IUU fishing is a major threat to maritime security, particularly so in Indonesia as one of the largest archipelagos.
- Local Indonesian fishing communities want to be involved in addressing IUU fishing problems but there is gap in local – national governance cooperation.
- More attention needs to be paid to the enhancement of inclusive governance structures and the formulation and implementation of policies and regulations that take local fishing communities and fishers into account

Abstract

Illegal, Unreported and Unregulated (IUU) fishing has been identified by the UN as one of the seven major threats to global maritime security; it causes loss of economic revenue, severe environmental damage, and far-reaching livelihood implications for coastal communities. Indonesia, by far the biggest archipelagic state, faces enormous challenges in all aspects of IUU fishing and addressing those is one of the current Indonesian Government's top priorities. This article addresses the under-researched dimension of how IUU fishing affects fishing communities. With the use of collage making focus groups with fishermen from different Indonesian fishing communities, the research highlights the interrelated environmental (depletion of resources), socio-economic (unbridled illegal activities at sea), cultural (favouritism) and political (weak marine governance) dimensions of IUU fishing as experienced at the local level. However, the research also indicates a strong will by fishermen to be seen as knowledge agents who can help solve the problem by better dissemination of information and cooperation between the local government(s) and the fishing communities. The article concludes by arguing for the involvement of local fishing communities in national and international policy making that addresses IUU fishing.

Keywords: illegal fishing; local fishing communities; maritime security; Indonesia; collage making

1. Introduction

Illegal, Unreported and Unregulated (IUU) fishing has been identified by the UN as one of the seven major threats¹ to global maritime security (UN General Assembly 2008: 17-33). It is estimated that illegal fishing accounts for one third of global annual catches and substantially impacts on the marine environment and coastal communities that rely on fisheries for their livelihoods (US NIC 2016: 6).

Indonesia, by far the biggest archipelagic state, faces enormous challenges in all aspects of IUU fishing and addressing those is one of the current Indonesian Government's top priorities (Parameswaran 2017). Indonesia supplies an approximate 34% of the ASEAN region's fish products reaching the global market (Almuttaqi 2014) and IUU fishing costs the Indonesian economy an estimate USD 3 billion annually (ASEAN News n.d.). In 2015, the Indonesian Ministry for Marine Affairs and Fisheries (KKP) conducted audits on 1,132 vessels and found all of them in violation of fishing laws and regulations, such as for instance not landing catches in fishing ports, deactivation of monitoring devices (VMS), and fishing outside the designated fishing grounds (IOM, KKP, and Coventry University 2016:19).

In anti-IUU fishing policies, much emphasis has been placed on the transnational dimension of IUU fishing (Chapsos and Hamilton 2019, Liddick 2014). In particular the range of cross-border activities of distant water fishing² nations' (DWFNs) fleets and vessels, which are registered in 'open registries' and operate within maritime zones of different coastal states (Telesetsky 2015, Palma et al. 2014:6-9), receive attention.

This article addresses the under-researched dimension of how IUU fishing affects fishing communities of coastal states. Using Indonesia as case study, the article will address the kind of problems local communities face and the kind of solutions they can offer. First, the article provides a general overview of the international policy developments with respect to IUU fishing. It then discusses Indonesia's understanding of IUU fishing and its most recent government responses to the phenomenon. Finally, the article brings the perspective of the Indonesian fishing communities into the analysis.

¹ The other six specific threats to maritime security, are: piracy and armed robbery at sea; terrorist acts involving shipping; offshore installations and other maritime interests; illicit trafficking in arms and weapons of mass destruction; illicit traffic in narcotic drugs and psychotropic substances; smuggling and trafficking of persons by sea; and intentional and unlawful damage to the marine environment.

² The UN Food and Agriculture Organisation (FAO 1996) defines as 'distant waters fisheries' the quantities taken by vessels in all FAO major fishing areas other than those adjacent to the flag State.

60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118

The authors utilise policy documents and media reports, as well as qualitative primary data collected in a collage-making focus group conducted in 2017 with five Indonesian fishing community leaders, to explore how these communities are affected, and how they understand and respond to the challenges posed by IUU fishing. The article's main argument is that in order to better understand IUU fishing the focus needs to be redirected to the local level; currently the main focus is on national and transnational dimensions. The research shows that, at the level of local fishing communities, IUU fishing is part and parcel of an intricate web of cultural, socio-economic, and environmental factors, and as such, is more than a 'fishing' problem.

2. IUU Fishing as a global security challenge

The increasing acknowledgement of the severe implications and extent of IUU fishing at the global level, is reflected on the United Nations' Sustainable Development Goals (SDGs), and SDG14 'Life Below Water' in particular. The latter highlights that over three billion people depend on marine and coastal biodiversity for their livelihoods, while 30 per cent of the world's fish stocks are overexploited (UNDP 2018). Sander et al. (2014:114-6) argue that IUU fishing poses a significant socio-economic threat -both direct and indirect- to coastal communities' livelihoods.

Although, IUU fishing is not a new phenomenon, the FAO only introduced the IUU concept in the 2000s in an effort to address severe fishing management concerns at a global level (FAO 2001). IUU fishing encapsulates activities conducted by either national or foreign vessels within Regional Fisheries Management Organisation's (RFMO) zones or maritime zones where coastal states exercise jurisdictional rights, which contravene either the RFMO or the coastal state's laws and regulations respectively. Examples of such activities include (but are not limited to) unlicensed cross-border hopping, unlicensed fishing in RFMO and/or coastal states' Exclusive Economic Zone (EEZ), fishing in marine protected areas, fishing with dual or false flag, catching non-permitted species, use of illegal gear, transferring fish at sea without authorisation, misreporting / underreporting catches, fishing out of season, and so on (US NIC 2016: 6). In order to curb those IUU activities, the FAO (2018) has recently called upon states to enhance fisheries governance and management, to utilise international tools such as the Port State Measures Agreement (PSMA) and to advance the technology of information sharing.

119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
At a global scale, it has been established that between 1998 to 2003 illegal catches constantly account for more than one third of the total fish catches in the Eastern Central Atlantic and Western Central Pacific regions (Agnew et al. 2009). According to Agnew et al (2009: 4) this constant pattern is closely related to poor fisheries management and lack of control and governance, and developing countries in particular, are vulnerable to such illegal activities conducted by both local fishermen and DWFN fleets. Of relevance to our argument, Southeast Asia is considered to be among the areas with the highest degree of illegal fishing (Petrossian 2015: 43). The key drivers that enable IUU fishing to flourish in this region are limited surveillance capacity, poor governance, corruption, the abundance of highly valuable commercial species and access to ports of convenience that act as gateways for smuggling illegally caught fish (Petrossian 2015: 45-46). More studies support these findings and identify weak governance and poor fisheries management, especially in developing countries, as drivers that sustain and even expand IUU fishing and other fishing crimes (Sander et al. 2014; US NIC 2016). In 2012, Interpol established the Environmental Compliance and Enforcement Committee³ (ECEC) to assist in identifying emerging patterns and trends in the field of environmental crime enforcement, with a dedicated 'Fisheries Crime Working Group' which specifically focuses on fisheries issues.

150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
Where most of the international IUU fishing policies focus on the state, the main question raised in this article is: where does the local enter international policy debates? Local fishermen and fishing communities are routinely mentioned in international policy documents and agreements. The FAO Code of Conduct for Responsible Fisheries, for example, refers to the 'traditional practices, needs and interests of local fishing communities' and the Stradling Stocks Agreement requires state parties to 'take into account the interest of artisanal subsistence fishermen' (FAO 1995). In the UN Report of the World Summit on Sustainable Development a difference is made between fisheries and artisanal fisheries. Whereas fisheries are referred to as objects of 'poverty eradication' (UN, 2002: 10), 'artisanal fisheries' are referred to as 'programs' that can enhance food production in a sustainable manner (UN 2002: 30). More recently, in the UN 2030 Agenda for Sustainable Development, states declared that they 'will devote resources to developing ... fisheries ... supporting ...

171
172
173
174
175
176
177
³ See Interpol, Environmental Compliance and Enforcement Committee (ECEC) and Working Groups [online] available from <https://www.interpol.int/Crime-areas/Environmental-crime/Committee-and-Working-Groups> [accessed 3 Jul 2018].

178
179
180 especiallyfishers in developing countries' (UN 2015: 7) and 'provide access for small-scale
181
182 artisanal fishers to marine resources and markets' (UN 2015: 24).

183
184 The FAO IUU-International Plan of Action is rather silent with respect to local
185 communities and small-scale fishermen (FAO 2001), however, the 2007 Report on IUU
186 Fishing, mentions that 'poverty-driven local communities with subsistence and small-scale
187 IUU fisheries' are subjected to 'a range of [devastating] IUU situations' (FAO/IMO 2015: 2).
188 The 2015 Report uses similar language and refers to 'the global costs of IUU fishing ... reducing
189 the productivity of legitimate fisheries, including subsistence and artisanal fisheries in coastal
190 areas' (FAO/IMO 2016: 3).

191
192 The UNODC has raised another concern with respect to local fishing communities,
193 namely that the 'range of illegal activities in the fisheries sector ... [including] illegal fishing ...
194 are also carried out by artisanal and small-scale fishers that revert to illegal fishing to
195 supplement a meagre income' (UNODC 2011: 110). This is also broadly shared by the WTO,
196 which concluded in its 2013 Trade Policy Review that 'illegal fishing, by foreign and domestic
197 operators, also remains a serious problem ...' (WTO 2013: 77).

198
199 To the extent that local fishing communities and fishermen are portrayed in such
200 international policy documents, it is as vulnerable victims and/or perpetrators, who are in
201 need of development support or to be subjected to legal countermeasures. There is nothing
202 much in these international policy documents and agreements that suggests that local fishing
203 communities and fishermen could also be considered as knowledgeable and as part of the
204 problem solving. This is where our article will make its contribution. The next section will
205 discuss illegal fishing in Indonesia after which the focus will be on the local communities.

206 207 208 209 210 211 212 213 214 215 216 217 218 219 **3. Illegal fishing in Indonesia**

220
221 Shortly after his inauguration in 2014, Indonesian President Joko Widodo introduced his anti-
222 IUU fishing strategy (Widhiarto 2014), which included a no-tolerance policy and the sinking of
223 illegal fishing vessel and the establishment of a Task Force (Satgas 115) with the mandate to
224 combat IUU fishing in Indonesia (Salim 2015). Much of the problem was presented as violation
225 of Indonesia's national sovereignty, which appeals very much to the domestic audience
226 (Almuttaqi 2014).

227
228 Critics of this policy have expressed concerns, especially in terms of damaging
229 Indonesia's relations with neighbouring countries, including China, and urged President
230
231
232
233
234
235
236

237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295

Jokowi and Minister of Marine Affairs and Fisheries Susi Pudjiastuti to reconsider and revoke this practice (Munthe and Kapoor 2018; Parameswaran 2015). Since the implementation of this policy, more than 380 vessels have been sunk. Blowing up vessels caught fishing illegally in Indonesian waters (such as those from Vietnam, the Philippines, Malaysia and China), is headline news. This publicity is particularly used as deterrence for future perpetrators (The Jakarta Post 2017; Parameswaran 2017a).

In late 2015, a Training Needs Analysis (TNA) was conducted among key Indonesian maritime security stakeholders, aiming -among others- to examine how the relevant state actors understand and utilise the maritime security concept. Findings of this analysis confirmed that IUU fishing and intentional damage to the marine environment was identified as the predominant threat to Indonesia's maritime security, while the Indonesian Navy (ITN) was flagged up as the state agency with the most important maritime security function (Chapsos and Malcolm 2017: 181-2). IUU fishing's top position among the Indonesian Government's priorities list has been reconfirmed in more reports, where additional governance and regulatory initiatives have been introduced to combat the phenomenon. These initiatives include for example the ban on transshipments and unsustainable fishing gears, prohibition of ex-foreign and foreign vessels to fish in Indonesian waters, etc. (Morris and Paoli 2018: 33; IOM, KKP and CU 2016: 12-22). But, IUU fishing in Indonesia is also often associated with other forms of transnational organised crime within the fishing industry, such as tax evasion, human trafficking and smuggling, forced labour, document forgery, etc., to name just a few (Chapsos and Hamilton 2019; IOM, KKP and CU 2016).

All the above illegal and criminal transgressions were included in the much-anticipated Presidential Regulation No. 16 on the Indonesian Ocean Policy (2017). This inclusive and holistic approach differentiates the Indonesian approach from existing conceptualisations of IUU fishing, which is identified and understood internationally as one of the seven major maritime security challenges and consequently an integral part of the maritime security concept. Interestingly though, the Presidential regulation identifies IUU fishing as a separate activity from maritime security, as the following diagram shows (see Figure 1).

***** INSERT FIGURE 1 HERE *****

296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354

This distinction between the concepts of Maritime Security and IUU fishing results in conflicting mandates and enforcement practices that may have consequences for local fishing communities. In this array of overlapping and conflicting mandates, the Navy (ITN), the National Marine Police (POLAIR), the District Attorney and the Indonesian Coast Guard are responsible for maritime security *and* IUU fishing, but the Ministry for Marine Affairs and Fisheries (KKP), which is responsible for addressing IUU fishing and fisheries crimes, is excluded from upholding maritime security. As such, significant complications emerge with respect to the question as to which ministry is responsible to coordinate local responses to violent and criminal conduct at sea and transnational crimes.

This question is pertinent as the Presidential policy makes a clear reference to the role of provincial and local governments in managing the marine resources in their areas of responsibility, as well as the importance of their relationship with the central Government and their engagement with their communities in monitoring their maritime zones (Presidential Regulation 2017: 15). The fundamental reform in Indonesia's local and regional governance which was implemented between 1995 and 2009 (Booth 2011: 32) adds an additional layer of complication in jurisdiction and administrative overlap in the maritime domain (Firman 2009: 153; Fox, Adhuri and Resosudarmo 2005).

Furthermore, many studies identify inadequate regional regulations as one of the causes of fish depletion (Heazle and Butcher 2006: 285); lack of cooperation between provinces and local governments significantly impacting coastal zone management (Siry 2011: 476); and ineffective governance failing to sustainably exploit the available marine resources (Dutton 2005: 177). Yet, in this problematic context and challenging maritime governance environment, no action plan or strategic guidance has been introduced in the document to either utilise this potential in order to enhance any of the key priorities identified in the Indonesian Ocean Policy. This potential involvement of regional administrations and local communities in the governance structure -as will be discussed in the following section- could be essential for the Indonesian fishing communities, especially in combating IUU fishing.

This community level is highly relevant since Indonesian coastal communities 'contribute more than 80 per cent of fish production, provide employment for over 7.3 million people and yield significant government revenue' (Adhuri et al. 2016: 198). Indonesia is the world's second largest producer of wild-capture fish, accounting for 9.9 million tons in 2016, 60% of which was from small-scale fishermen (Muawanah et al. 2018). The livelihoods of

355
356
357 these populations are under threat as 'Indonesian fishers and foreign fleets continue to
358 overexploit the Indonesian fisheries' and there is far-reaching 'destruction of critical coastal
359 habitats, particularly mangroves and coral reefs' (Muawanah et al. 2018: 150). In general,
360 research on coastal and/or fishing communities is dominated by debates about their
361 vulnerability and resilience (Johnson et al. 2014), marine resource conflicts (either intra-
362 community or between communities) (Yamazaki et al. 2015), and access to resources and
363 insecurity (Koning 2006). To understand these local dynamics in more detail, it is important
364 to include the often-overlooked voice of fishing communities themselves.
365
366
367
368
369
370
371

372 **4. Methodology**

373
374 The research on which this article draws uses an explicit participatory approach, in which the
375 research participants become co-producers of knowledge, through a visualization method,
376 called collage making (Knowles and Sweetman 2004). Collage making is a technique used in
377 academic and applied research to express thinking in alternative ways and to facilitate
378 dialogue, through the using of 'fragments of found images or materials and gluing them to a
379 flat surface to portray phenomena' (Butler-Kisber and Poldma 2011: 2). In this research the
380 phenomenon under investigation related to the experiences of the participants with regards
381 to maritime (in)security. The collages 'have the capacity for evoking meaning and feeling not
382 available in written transcripts' (Gerstenblatt 2013: 302) which we considered quite suitable
383 in the Indonesian cultural setting. Collage making thus allows a focus on issues the research
384 participants select (not pre-set by the researchers), it increases voices, and offers a way to
385 make tacit knowledge and ideas more explicit (see Vacchelli 2018; Plakoyiannaki and Stavraski
386 2018).
387
388
389
390
391
392
393
394
395

396 Community leaders from five Indonesian fishing communities were invited (and
397 accepted) to join the research. These fishing locations were selected on the basis of their
398 exposure to maritime security threats and share a history of engagement with transnational,
399 national and local 'illegal' fishing. The communities are located in (1) North Sumatra; (2) South
400 Java; (3) Flores; (4) Southeast Sulawesi; and (5) East Nusa Tenggara. Each community was
401 represented by what we refer to as a 'community leader'. This is not an official function in the
402 Indonesian bureaucracy but a more informal position as someone who can represent the
403 community. All community leaders have been or still are fisher and/or are active in the fishing
404 sector (fish trade for instance). The project also included further research in the fishing
405
406
407
408
409
410
411
412
413

414
415
416 locations with additional focus groups, informal interviews, and observations. This article is
417 based on the data collected from the initial collage making and focus group with these five
418 representatives.
419

420
421 The collage making took place in Jakarta and the participants were invited to express,
422 with images, the experiences and practices related to misconduct at sea and their ideas on
423 how such offences are addressed (by law enforcement) and with what success. Each
424 participant made an individual collage with the use of clippings from a variety of magazines
425 so as to allow them to express the specifics of their location. The magazines were bought in
426 Indonesia and offered a wide variety of colourful periodicals with lots of images, such as news,
427 sports, and cooking magazines. The idea behind offering a wide variety of magazines is that
428 collage making is about leafing through the magazine to see what associations and ideas
429 develop from seeing images (so it is not necessarily about finding the 'right' image). Each
430 participant made his own selection from the magazines on offer (each used about 5 to 6
431 magazines, sometimes we circulated them if that was a request). Next to the magazines, we
432 brought poster-paper, scissors, glue and markers. We allowed participants to draw (which
433 some did) and use arrows etc if they felt like it.
434

435
436 The collage making was facilitated by the authors of this article and supported by
437 simultaneous translation as only one team member spoke Indonesian. All community leaders,
438 who had never met before, were in the same room for the collage making but each made
439 their own collage without interactions with the others (they were seated across a large U-
440 shaped table). The choice for individual collage making was aimed at discovering similarities
441 and differences in the experience of maritime threats. The collages were subsequently shown
442 and presented (explained) to each other. These presentations and the following focus group
443 discussion among the five community leaders on core threats and priorities were tape-
444 recorded, transcribed and translated. The quotes in the article are taken from these
445 transcriptions. At this stage, the collages were mainly used as a 'tool' to uncover the main
446 maritime security concerns and how these were addressed by maritime authorities.
447

448
449 The focus group element was chosen so that the participants could respond to each
450 other on issues that are relevant to all (Morgan 1996). Participants questioned and discussed
451 the points made by others from which shared and/or new understandings emerged. For our
452 analysis, we used a thematic analysis (of the transcribed recordings) which consisted of the
453 identification and interpretation of themes, or 'recurrent and distinctive features of
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472

473
474
475 participants' accounts, characterising particular perceptions and/or experiences, which the
476 researcher sees as relevant...' (King and Horrocks in King and Brooks 2018: 220). Following the
477 thematic analysis practice, the researchers all read and re-read the transcripts and followed
478 an open coding approach to identify the themes that were discussed most. This resulted in 4
479 core themes (see below). In this article we have focused on the main concerns that all
480 locations shared. There are of course regional differences but nothing that stood out
481 substantially in terms of IUU fishing and other maritime threats. As we address later in the
482 article, there is some concern among the locations farther away from the central government
483 (Jakarta, on the island of Java) that, because of their remoteness, they receive less attention
484 and support.
485
486
487
488
489
490
491

492 493 494 495 **5. Findings: The Indonesian fishing communities' perspective**

496
497 In this section we will discuss the four core themes that emerged from the collage making and
498 the discussions⁴:

- 499
500 1) Marine governance: shortcomings of local governments or authorities, turning a blind eye,
501 corruption, lack of support, favouritism;
502
503 2) Illegality: a range of illegal activities being witnessed at sea; use of illegal means to fish,
504 crossing boundaries, selling fish mid-sea, trafficking of people;
505
506 3) Economic hardship and the future of the marine environment: concerns for next
507 generations; nothing left to fish, marine degradation, lack of alternative economic activities;
508
509 4) Education: restricted educational opportunities, no skills training, particularly for women,
510 lack of knowledge on regulations).
511
512

513
514 In the final section (5.5) we will discuss solutions that the community leaders brought to the
515 fore in addressing IUU fishing.
516
517

518 519 *5.1 Marine governance* 520 521 522 523 524 525 526 527

528 ⁴ The appendix shows an example of a collage in which some of these issues are expressed through images.
529
530
531

532
533
534 *The tenth picture [on my collage] is a question mark. Representing the questions: Do we*
535 *have a weak intelligence system? Or do the law enforcers purposefully close their eyes*
536 *(Fishing Community Leader D, 2017).*
537
538
539
540

541 This quote questions a core problem encountered by the fishing communities in Indonesia
542 related to the vastness of the Indonesian maritime space. Minister Pudjiastuti acknowledged
543 in an interview with the BBC in 2017 (Henschke 2017) that the policing and monitoring of
544 illegal activities at sea is almost a 'mission impossible'. The remoteness and limited
545 connectivity of Indonesian islands and communities pose significant challenges to the central
546 government, hence most governance functions rely on local governments and authorities of
547 which all participants are quite critical.
548
549
550
551
552

553
554
555 *...the [national] government [should] respond immediately to our problems in the*
556 *regions. ... in the regions, the local authorities seem to be closing their eyes .. (Fishing*
557 *Community Leader B, 2017).*
558
559
560

561 *The second picture is a picture of sleeping people. They are the local authorities that are*
562 *sleeping, because if there is support in [location C], people who receive this are always*
563 *the same people...We don't want the local authorities to close their eyes (Fishing*
564 *Community Leader, C, 2017).*
565
566
567
568

569
570 When law enforcement is either not around, not taking action or becoming part of the
571 problem, at times the fishermen take the 'law' into their own hands:
572
573
574

575 *In 2011 we reported to the government ... illegal activities of catching fish, but they did*
576 *not respond to our issues; as a result, the boat conducting such activity got burned. ...*
577 *And then it happened again in November last year, if I'm not mistaken. Another boat*
578 *was also burned by the fishermen of [location]. ... the local authorities did not follow up*
579 *on the issue. As a result, the fishermen took action by themselves by burning the boats*
580 *(Fishing Community Leader B, 2017).*
581
582
583
584
585

586 587 5.2 Illegality 588 589 590

591
592
593 Weak local governance and practices such as turning a blind eye are conducive to illegal
594 activities, such as taking part in transshipments, fishing for protected species and people
595 trafficking. Transshipments, which are illegal in Indonesia (Global Indonesian Voices 2017),
596 enable fishermen to sell their catch to foreign vessels at sea with potentially a better price
597 than attained at a local fish auction. At the same time, foreign fleets poaching the Indonesian
598 seas are provided with the option to simply buy the fish at sea already caught by locals. One
599 of the research participants argues that:
600
601
602
603
604

605
606
607 *there's a possibility that those funding the local fishermen are foreign entrepreneurs*
608 *(vessels). Because it is very curious that they would share the fish that they catch to*
609 *foreign vessels. I believe that it is because they are funded by foreign businessmen. So,*
610 *they fund the local fishermen and the fish products are then sold to the foreign entities*
611 *(Fishing Community Leader B, 2017).*
612
613
614

615
616
617 Yet, illegal activities are not confined to the seas. Protected species are sold on shore:
618
619

620 *at every unloading activity you can see the sharks there. The law enforcers would just*
621 *glance... If it is a small fisherman who catches a shark they reprimand us, but if it is the*
622 *big boss who catches the shark, the local authorities don't do anything. Why? Perhaps*
623 *there is a hidden agenda. I don't know (Fishing Community Leader C, 2017).*
624
625
626
627
628

629 Except for the issue of protected species, research participant C also alludes to the possibility
630 of class justice; the unequal treatment of those perceived to have less power or being lower
631 ranked in terms of socio-economic status ('small fishermen' versus 'big bosses').
632
633

634 In a recent study, Jaiteh et al. (2017) examined the impact of shark finning on coastal
635 community livelihoods and found extensive, cross-boundary shark fishing in Australian
636 waters. This is in violation of the MoU Box⁵ established in agreement between Australia and
637 Indonesia. The fishermen believe they can catch larger, more valuable shark species in
638
639
640

641
642
643 ⁵ The MOU Box (Australia-Indonesia Memorandum of Understanding regarding the Operations of Indonesian
644 Traditional Fishermen in Areas of the Australian Fishing Zone and Continental Shelf) is an area of Australian
645 water in the Timor Sea where Indonesian traditional fishermen, using traditional fishing methods only, are
646 permitted to operate (<http://www.agriculture.gov.au/fisheries/international/cooperation/indonesia> [accessed
647 03 Jul 2018])
648
649

650
651
652 Australian waters (Jaiteh et al. 2017: 226). Indonesian fishermen have been arrested on
653 numerous occasions fishing illegally in Australian waters (Amnifu 2017), despite the risks
654 involved:
655
656
657
658

659 *If we, the traditional fishermen, violate the MOU Box borders, the risk is that our boats*
660 *would be caught and burned in the middle of the sea. That's the risk (Fishing Community*
661 *Leader D, 2017).*
662
663
664

665
666 Finally, the smuggling of migrants by fishermen came up as a common theme, often linked to
667 the hardship and the insufficient income of fishermen to sustain their families from just
668 fishing. As the community leaders below put it, fishermen are tempted despite the involved
669 risks of being arrested, since in one single trip they can potentially earn more than by fishing
670 a whole year:
671
672
673
674

675
676 *The syndicates, whose business is smuggling illegal immigrants to Australia, would [...]*
677 *try to convince the fishermen and the fishermen would be influenced because rather than*
678 *fighting to make a living everyday ... it would be better to work as illegal immigrant*
679 *smuggler. The captain would be promised to get salary of Rp.40 million⁶ and ship crew*
680 *Rp.30 million⁷ (Fishing Community Leader D, 2017).*
681
682
683
684
685

686 5.3 Economic hardship and the future of the marine environment

687

688 A bottom-line argument in all the stories is the economic hardship of living in a coastal area;
689 being pushed into 'illegal' practices is considered unavoidable:
690
691
692

693 *why do fishermen communities seem to have cooperation with certain parties to carry*
694 *out these kinds of illegal activities? Such as helping illegal immigrants or taking part in*
695 *illegal marine activities? Because the welfare of the fishermen is lacking. ... this happens*
696 *because the government does not empower the fishermen so that they can increase*
697 *their income, by disseminating information regarding profitable activities. (Fishing*
698 *Community Leader B, 2017).*
699
700
701
702
703

704 ⁶ Approximately £2,000

705 ⁷ Approximately £1,500

706
707
708

709
710
711
712
713 *In our region, we are far from the city, and we don't have good sailing equipment. And*
714 *even if we catch many fish or other marine products, where shall we sell them? We need*
715 *support to empower ourselves to build a place to store our fish, or to start a business, or*
716 *to market our product, in order to achieve welfare for the people in my village (Fishing*
717 *Community Leader A, 2017).*
720

721
722
723 The above shows that local 'needs' (welfare via local economic investments) stands in stark
724 contrast with some of the core national policies that have been implemented by Indonesian
725 President Widodo, such as the sinking of vessels (The Jakarta Post 2015). Whereas local
726 fishermen seem to be supportive of the policy (Gunawan 2018), as the punishment of
727 foreigners poaching their marine resources offers economic benefits to their own business
728 (Llewellyn 2018), it does not 'solve' the expressed economic vulnerability of fishing
729 communities.
730
731
732
733
734

735
736
737 But there is also an environmental vulnerability. All the fishing community leaders expressed
738 in their collages the endangered future of the marine environment. Nobody can experience
739 and assess the environmental degradation and the damage inflicted to the oceans due to IUU
740 fishing practices in a more direct and personal way than the local fishing communities
741 themselves. They have been making their living in these same marine areas for as long as they
742 exist, and their narrative is revealing a major concern for the generations to come:
743
744
745
746
747

748 *... we think that after our generation - if we don't maintain this - then we'll only leave*
749 *a story for our grandchildren; a big empty story, because the coral reefs and everything*
750 *else will be damaged (Fishing Community Leader D, 2017).*
751
752
753
754

755 Without exception, the research participants were conscious of the implications of IUU fishing
756 to their marine environment and its impact on the decline of fish stocks. They noted that IUU
757 fishing practices are not limited to those by DWFNs, but that local fishermen are also involved
758 in illegal practices such as using explosives and other chemicals in their efforts to maximise
759 their catches, so they realise the delicate balance between making ends meet and
760 preservation.
761
762
763
764
765
766
767

768
769
770
771
772 ... fishermen now have to go far away to find fish because the coral reefs are now
773 damaged due to the explosives and potassium. That is why they have to travel far away
774 to catch fish (Fishing Community Leader E, 2017).
775
776

777
778
779 And the thing that damages the environment, especially in my area, is the use of fishing
780 nets and explosives ... how to maintain or preserve the sea environment (Fishing
781 Community Leader B, 2017).
782
783

784
785 They recognise that these are unsustainable practices but local governments are again
786 virtually absent as noted by this research participant:
787

788
789
790 ... the damage to the coral reef is because of the use of explosives, potassium, and
791 poison, as well as the use of compressors as diving equipment. We have filed our
792 objection to the local government long time ago. We have reported this to the police,
793 to the navy, and they came back with an excuse, "We don't have the operational
794 budget." We (fishermen) cannot arrest the perpetrators [...] (Fishing Community
795 Leader D, 2017).
796
797
798
799
800

801 802 803 5.4 Education

804 A core theme that ran through many of the stories of the research participants was education.
805 The lack of education (and information) at the local level and of those living in fishing
806 communities was linked, for example, with the concern for future generations who are still
807 entering the fishing profession without enough training and education or who are not offered
808 alternatives from fishing through educational opportunities; and for women who lack job
809 prospects in fishing communities. In addition, lack of education was also linked to illegality,
810 as with better information and education illegal behaviour might be circumvented (for
811 instance better knowledge on rules and regulations at sea). Better education may also
812 improve people's access to alternative employment.
813
814
815
816
817
818
819
820
821
822
823
824
825
826

827
828
829 *I hope ... we can start giving more education because most people who become*
830 *fishermen only graduated from elementary and primary school (Fishing Community*
831 *Leader E, 2017).*
832
833
834

835
836 *There is a lack of dissemination by the government to the community, especially to the*
837 *women in fishing villages regarding creative activities that may provide additional*
838 *income (Fishing Community Leader B, 2017).*
839
840
841

842
843 *Another issue is that we don't understand about the international regulations, since we*
844 *have little education and experience. (Fishing Community Leader A, 2017).*
845
846
847

848 The importance of education and awareness raising (hinted at in the quotes when referring
849 to regulations) is an acknowledged central requirement in order to accomplish sustainable
850 coastal management as well as to improve economic returns and livelihood (White et al.
851 2005). There is however, an ongoing educational challenging in Indonesia. Whereas the net
852 enrolment rate for primary education is around 90% (UNESCO, 2018) this remains low (below
853 60%) in poor districts (World Bank, 2014) which, seriously impedes future employment
854 opportunities. Furthermore, those that actually graduate primary education, around 80% in
855 2007/08, is an area of concern and implies that quite some children enter the “workforce as
856 functional illiterates” (Suryadarma and Jones, 2013: 2).
857
858
859
860
861
862
863

864 *5.5 Solutions*

865 The problems in the maritime domain in general and the fishing sector in particular are well
866 understood by the research participants. However, they do not only talk about existing
867 problems but they also offer solutions which range from ‘*the education of ship masters and*
868 *the ship crews by disseminating information regarding the prohibited zones*’ (Fishing
869 Community Leader E, 2017); ‘*saving the marine and coastal environment [through]*
870 *customary law*’ (Fishing Community Leader D, 2017); and overseeing and implementing ‘*the*
871 *law at the district level and at the sub-district level*’ (Fishing Community Leader B, 2017). The
872 most far reaching and comprehensive suggestion however, concerns:
873
874
875
876
877
878
879
880
881
882
883
884
885

886
887
888
889 *the dissemination of information and cooperation between the local government and*
890 *the fishermen. The government needs to engage the fishermen, need to interact with*
891 *the people related to maritime issues ... If we only rely on law enforcement agencies to*
892 *enforce the law without interacting with the coastal people it would be useless,*
893 *because it is the fishermen who spend most time at the sea. Just like when they are*
894 *fishing in the sea they will spend days, even weeks, to catch fish before they return to*
895 *land. So, they know what activities are happening at the sea. So, if the government ...*
896 *would like to identify the problems occurring at the sea or maritime security without*
897 *directly involving the fishermen communities as the source of concrete information,*
898 *then these inputs would be useless. ...If the government properly disseminates good*
899 *information to the people, empowers the people and pays attention to the fishermen's*
900 *welfare, and also provides support, maybe the fishermen might help the government*
901 *by becoming the eyes and ears, spying on illegal activities, and identifying misconducts*
902 *happening at the sea (Fishing Community Leader B, 2017).*
903
904
905
906
907
908
909
910
911
912

913
914 It is quite relevant to note at this point that from the Training Needs Analysis (mentioned
915 above), it can be concluded that governmental actors and national enforcement agencies
916 consider the 'need to look beyond the state' (Chapsos & Malcolm, 2017: 182). The related
917 survey indicated that they see 'the most important actors in coastal communities [were] tribal
918 leaders in the fishing communities [and] fishers (Ibid.).
919
920
921
922

923 **6. Discussion: Involve local actors in the eradication of IUU fishing!**

924
925 In our research, we set out to examine how Indonesian fishing communities understand,
926 respond to, and are affected by IUU fishing. There is clearly a lack of including the knowledge
927 and experiences of local fishing communities in national and international policies and in
928 efforts to solve IUU fishing; in the Indonesian case this is exacerbated by a gap in local -
929 national governance cooperation.
930
931
932
933

934 Existing literature indicates that one of the key enabling factors of IUU fishing is a weak
935 governance structure and our analysis of the local fishing community leaders' statements
936 highlight in the most emphatic way that this applies to Indonesia as well. The existing gap in
937 the Indonesian governance structure, and in particular the inability, ineffectiveness and
938 inefficiency of the local government(s) to act as the extension of the central government's
939
940
941
942
943
944

945
946
947 policy and law enforcement in their regions, generates a series of problems related to IUU
948 fishing and severe conditions in the more remote areas of the Indonesian archipelago.
949 Indonesia's decentralisation and regional autonomy did not bring the necessary answer
950 (Firman 2009; Siry 2011). Fishing communities feel that they are not supported enough and
951 that they cannot rely on the local government to offer solutions to their security problems,
952 when on the other hand the central government is too far for them to reach and vice versa.
953 They even occasionally have to take the law in their own hands, and destroy other fishing
954 boats fishing illegally in the absence or inaction of local enforcement authorities. The
955 Presidential Regulation issued in 2017 to determine the Indonesian Ocean Policy sadly
956 confirms this notion, by including no action plan in relation to its implementation in a way
957 that local governments and coastal communities will be the main beneficiaries, but equally
958 importantly, on their potential roles to support the national efforts to combat IUU fishing.

959
960 What also implicitly and explicitly appears as a crosscutting theme in all areas
961 examined in this article and closely related to the point made above, is corruption. Whether
962 the fishing community leaders referred to governance and infrastructure, law enforcement
963 or illegal fishing practices such as fishing and landing protected species, use of explosives, and
964 so on, there is always an element of questionable involvement of local government
965 authorities underpinning their narratives. With corruption being so eminently present in
966 Indonesia (see Mietzner 2018) an important question is whether IUU fishing policies that do
967 not acknowledge this 'culture of corruption' at the local level stand a change in the first place.

968
969 The extent of IUU fishing activities have multidimensional and multifaceted livelihood
970 implications in Indonesian fishing communities, the most obvious being the depletion of fish
971 stocks in their coastal fishing grounds. This very depletion causes economic hardship and a
972 consequential chain of different reactions: some would travel further away in search of richer
973 fishing grounds and risk the dangers posed by their small fishing boats, others turn to IUU
974 fishing and other maritime crimes (catching protected, but more lucrative species such as
975 sharks, using bombs and poison, or trafficking migrants). In addition, DWFNs' presence in
976 their waters is not only seen by some as a challenge, but also as a business opportunity, such
977 as for example to barter information for other goods, or sell their catch to foreign fishing
978 vessels for a better price. As a result, these Indonesian fishing communities are not seeing
979 themselves as completely distant from IUU fishing practices and other illicit activities; they
980 admit to being both victims and perpetrators of the same crimes (Fox 2009; Williams 2013).

1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
1027
1028
1029
1030
1031
1032
1033
1034
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044
1045
1046
1047
1048
1049
1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060
1061
1062

The impoverishment and disenfranchisement of local fishing communities is considered by many investigations as a causal factor than enables IUU fishing and other associated crimes (Chapsos and Hamilton 2019, Kisiangani 2010). Solutions are often suggested along the lines of a socio-economic betterment of the local fishing communities, which is connected to the regulated availability of fish stocks. While it is understood and accepted in (inter)national debates that coastal communities have a stake and role in the sustainable management of (their) coastal zones (FAO 1992), such insights have not yet led to the acceptance of a more participatory role of coastal communities. Our research has shown that the inclusion of the experiences of local fishing communities with witnessing IUU fishing practices and their suggested solutions for tackling these, could be an important way forward in both national and international policy making. Small-scale artisan fishermen are still mainly seen as objects rather than the owners of interventions (UN 2015). This neglect of the specific knowledge and potential capacity of local fishing communities to support the countering of illegal fishing, is reflective of the gap between local experiences and (inter)national policy making practices.

7. Conclusion

Indonesia cannot but fight IUU fishing and many of their policies and measures are much welcomed by the international community, notwithstanding the controversial nature of occasionally publicly sinking fishing vessels. The local dimensions of IUU fishing are often overlooked and/or ignored. Local fishermen and fishing communities are part of the problem but should also be part of the problem solving as this article has shown. More attention needs to be paid to the enhancement of inclusive governance structures, the formulation and implementation of policies and regulations that take local fishing communities and fishermen into account, and accountable cooperation between local and national governmental authorities.

References

Adhuri, D. S., et al. (2016) 'Green market for small people: Markets and opportunities for upgrading in small-scale fisheries in Indonesia.' *Marine Policy*, 63: 198-205.

Agnew DJ, Pearce J, Pramod G, Peatman T, Watson R, et al. (2009) Estimating the Worldwide Extent of Illegal Fishing. *PLoS ONE* 4(2): e4570. doi:10.1371/journal.pone.0004570

1063
1064
1065 Almuttaqi, I. (2014) 'Indonesia and the problem of illegal fishing'. *The Jakarta Post* [online]
1066 available from [http://www.thejakartapost.com/news/2014/04/05/indonesia-and-problem-](http://www.thejakartapost.com/news/2014/04/05/indonesia-and-problem-illegal-fishing.html)
1067 [illegal-fishing.html](http://www.thejakartapost.com/news/2014/04/05/indonesia-and-problem-illegal-fishing.html) [accessed 3 Jul. 2018]
1068

1069
1070 Amnifu, D. (2017) '5 Indonesian fishermen caught in Australian waters sent home'. *The*
1071 *Jakarta Post* [online] available from [http://www.thejakartapost.com/news/2017/11/14/5-](http://www.thejakartapost.com/news/2017/11/14/5-indonesian-fishermen-caught-in-australian-waters-sent-home.html)
1072 [indonesian-fishermen-caught-in-australian-waters-sent-home.html](http://www.thejakartapost.com/news/2017/11/14/5-indonesian-fishermen-caught-in-australian-waters-sent-home.html) [accessed 3 Jul 2018]
1073

1074 ASEAN News (n.d.) 'Illegal Fishing Costs Indonesia 3 Billion Dollars A Year' [online] available
1075 from <http://www.aseannews.net/illegal-fishing-costs-indonesia-3-billion-dollars-a-year/>
1076 [accessed 7 Jul. 2018]
1077

1078
1079 Booth, A. (2011) 'Splitting, splitting and splitting again: A brief history of the development of
1080 regional government in Indonesia since independence'. *Bijdragen tot de Taal-, Land- en*
1081 *Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia*, 167 (1): 31-
1082 59.
1083

1084
1085 Butler-Kisber, L., & Poldma, T. (2011) 'The power of visual approaches in qualitative inquiry:
1086 The use of collage making and concept mapping in experiential research'. *Journal of Research*
1087 *Practice*, 6(2): 1-16.
1088

1089 Chapsos, I. and Hamilton, S. (2019) 'Illegal fishing and fisheries crime as a transnational
1090 organized crime in Indonesia'. *Trends in Organized Crime*, 22 (3): 255-273
1091

1092 Chapsos, I. and Malcolm, J. (2017) 'Maritime Security in Indonesia: Towards a comprehensive
1093 agenda?' *Marine Policy*, 76: 178-184.
1094

1095
1096 Dutton, I. (2005). 'If Only Fish Could Vote: The Enduring Challenges of Coastal and Marine
1097 Resources Management in Post-reformasi Indonesia'. In B. Resosudarmo (Ed.) *The Politics*
1098 *and Economics of Indonesia's Natural Resources* (pp. 162-178). ISEAS-Yusof Ishak Institute.
1099

1100 EJF [Environmental Justice Foundation] (2011) *Fisheries and Food Security in the*
1101 *Commonwealth*. London: EJF.
1102

1103 EJF [Environmental Justice Foundation] (2005) *Pirates and Profiteers: How Pirate Fishing*
1104 *Fleets are Robbing People and Oceans*. London: EJF.
1105

1106
1107 FAO (2018) 'The fight to save our oceans: How illegal, unreported and unregulated fishing
1108 affects all of us' [online] available from [http://www.fao.org/fao-](http://www.fao.org/fao-stories/article/en/c/1136937/?utm_source=twitter&utm_medium=social+media&utm_campaign=fao)
1109 [stories/article/en/c/1136937/?utm_source=twitter&utm_medium=social+media&utm_cam](http://www.fao.org/fao-stories/article/en/c/1136937/?utm_source=twitter&utm_medium=social+media&utm_campaign=fao)
1110 [paign=fao](http://www.fao.org/fao-stories/article/en/c/1136937/?utm_source=twitter&utm_medium=social+media&utm_campaign=fao) [accessed 7 July 2018]
1111

1112
1113 FAO (2001) *International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported*
1114 *and Unregulated Fishing*. Rome, Italy: Food and Agricultural Organisation of the United
1115 Nations.
1116
1117
1118
1119
1120
1121

1122
1123
1124
1125
1126
1127
1128
1129
1130
1131
1132
1133
1134
1135
1136
1137
1138
1139
1140
1141
1142
1143
1144
1145
1146
1147
1148
1149
1150
1151
1152
1153
1154
1155
1156
1157
1158
1159
1160
1161
1162
1163
1164
1165
1166
1167
1168
1169
1170
1171
1172
1173
1174
1175
1176
1177
1178
1179
1180

FAO (1996) World Fishery Production 1950-1993. Supplement to the FAO Yearbook of Fishery Statistics 1993. Vol. 76. Catches and Landings. Rome, FAO. '2.6 - Landings from distant water fisheries' [online] available from <http://www.fao.org/docrep/003/W3244E/w3244e09.htm> [accessed 4 Jul 2018]

FAO (1995) Code of Conduct for Responsible Fisheries, [online] available from <http://www.fao.org/3/a-v9878e.htm> [accessed 10 January 2019]

FAO (1992) Fisheries Report No 474 on the Development of Community Based Coastal Fishery Management Systems for Asia and the Pacific, Rome: FAO.

FAO/IMO (2015) Report of the Second Session of the Joint FAO/IMO Ad Hoc Working Group on Illegal, Unreported and Unregulated (IUU) Fishing and Related Matters (Rome, July 2007).

FAO/IMO (2016) Report of the Third Session of the Joint FAO/IMO Ad Hoc Working Group on Illegal, Unreported and Unregulated (IUU) Fishing and Related Matters (Rome, November 2015).

FIAO/R1152 (En) JWG 3/15. ISSN 2070-6987. Food and Agriculture Organization of the United Nations, Rome. 2016 [online] available from <http://www.fao.org/3/a-i5736e.pdf> [accessed 12 January 2019]

FIRO/R1124 (En). ISSN 2070-6987. Food and Agriculture Organization of the United Nations, Rome. 2015 [online] available from <http://www.fao.org/3/a-i5070e.pdf> [accessed 12 January 2019]

Firman, T. (2009) 'Decentralization Reform and Local-Government Proliferation in Indonesia: towards a fragmentation of regional development'. *Review of Urban & Regional Development Studies*, 21 (2/3): 143- 157.

Fox, J.J. (2009) 'Legal and Illegal Indonesian Fishing in Australian Waters', in R. Cribb and M. Ford, *Indonesia beyond the Water's Edge: Managing an Archipelagic State*, Singapore, ISEAS Publishing.

Fox, J., Adhuri, D., & Resosudarmo, I. (2005). 'Unfinished Edifice or Pandora's Box? Decentralisation and Resource Management in Indonesia'. In B. Resosudarmo (Ed.) *The Politics and Economics of Indonesia's Natural Resources* (pp. 92-108). ISEAS-Yusof Ishak Institute.

Gerstenblatt, P. (2013) 'Collage portraits as a method of analysis in qualitative research.' *International Journal of Qualitative Methods*, 12(1): 294-309.

Global Indonesian Voices (2017) 'Illegal Transshipment: Is It a Problem for Indonesia? [online]. Available from <http://www.globalindonesianvoices.com/30725/illegal-transshipment-is-it-a-problem-for-indonesia/> [Accessed 28 June 2018]

1181
1182
1183
1184
1185
1186
1187
1188
1189
1190
1191
1192
1193
1194
1195
1196
1197
1198
1199
1200
1201
1202
1203
1204
1205
1206
1207
1208
1209
1210
1211
1212
1213
1214
1215
1216
1217
1218
1219
1220
1221
1222
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232
1233
1234
1235
1236
1237
1238
1239

Gunawan, A. (2018) 'N. Sumatra fishermen support govt policy to sink illegal, foreign fishing boats'. *The Jakarta Post* [online] available from <http://www.thejakartapost.com/news/2018/01/11/n-sumatra-fishermen-support-govt-policy-to-sink-illegal-foreign-fishing-boats.html> [accessed 28 June 2018]

Heazle, M. and Butcher, J. G. (2006) 'Fisheries depletion and the state in Indonesia: Towards a regional regulatory regime'. *Marine Policy*, 31 (2007) 276–286.

Henschke, R. (2017) '100 Women: Meet Susi Pudjiastuti, the Indonesian minister blowing up boats'. BBC News [online] available from <https://www.bbc.co.uk/news/world-asia-41438279> [accessed 28 June 2018]

IOM, KKP and CU [International Organisation for Migration, Indonesian Ministry for Marine Affairs and Fisheries and Coventry University] (2016) '*Report on Human Trafficking and Forced Labour in the Indonesian Fishing Industry and Fisheries Crime*', Policy Report, IOM: Jakarta.

Jaiteh, V.F., Loneragan, N.R. and Warren, C. (2017) 'The end of shark finning? Impacts of declining catches and fin demand on coastal community livelihoods'. *Marine Policy* 82, 224-233.

Jakarta Post (2017) 'Minister Susi to sink 100 more fishing boats this year' [online]. Available from <http://www.thejakartapost.com/news/2017/09/18/minister-susi-to-sink-100-more-fishing-boats-this-year.html> [accessed 28 June 2018]

Jakarta Post (2015) 'National scene: Decree to allow sinking of illegal fishing ships' [online]. Available from <http://www.thejakartapost.com/news/2015/10/22/national-scene-decree-allow-sinking-illegal-fishing-ships.html> [accessed 28 June 2018]

JALA and EJP (n.d.) '*When Fishing Turns Deadly: The Environmental and Social Impacts of Illegal Trawling in North Sumatra*'. London: EJP.

Johnson, T. R., Henry, A. M., & Thompson, C. (2014) 'Qualitative indicators of social resilience in small-scale fishing communities: an emphasis on perceptions and practice'. *Human Ecology Review*, 20(2): 97-115.

King, N. and Brooks, J. (2018) 'Thematic Analysis in Organisational Research'. In C. Cassell, A. Cunliffe and G. Grandy (eds.) *The Sage Handbook of Qualitative Business and Management Research* (chapter 14, volume 2). London: Sage, pp. 219-236.

Kisiangani, E. (2010) 'Somali pirates: villains or victims?' *South African Journal of International Affairs*, 17(3): 361-374.

Knowles, C. and P. Sweetman (2004) *Picturing the social landscape: visual methods in the sociological imagination* London, Routledge.

1240
1241
1242 Koning, J. (2006) 'Fishermen and Farmers: Entrepreneurs in Risks, Resources, and Resource
1243 Risks?' in J. Koning and F. Husken (eds) *Ropewalking and Safety Nets: Local Ways of Managing*
1244 *Insecurities in Indonesia*. Leiden ; Boston, Brill, pp. 147-174.
1245
1246

1247 Liddick, D. (2014) 'The dimensions of a transnational crime problem: the case of IUU fishing'.
1248 *Trends in Organised Crime*, 17(4): 290-312.
1249

1250 Llewellyn, A. (2018) 'Indonesia's fishy furore'. *The Interpreter* [online] available from
1251 <https://www.lowyinstitute.org/the-interpreter/indonesia-s-fishy-furore> [accessed 28 June
1252 2018]
1253

1254 Mietzner, M. (2018). 21. Indonesia: why democratization has not reduced corruption. In
1255 *Handbook on the Geographies of Corruption*, B. Warf (ed.) Cheltenham: Edward Elgar, pp.
1256 350-364.
1257
1258

1259 Morgan, D. L. (1996). Focus groups. *Annual review of sociology*, 22(1): 129-152.
1260

1261 Morris, L.J. and Paoli, G.P. (2018) *A Preliminary Assessment of Indonesia's Maritime Security*
1262 *Threats and Capabilities*. Santa Monica, Calif., and Cambridge, UK: RAND Corporation.
1263
1264

1265 Muawanah, U., Yusuf, G., Adrianto, L., Kalthar, J., Pomeroy, R., Abdullah, H., & Ruchimat, T.
1266 (2018). Review of national laws and regulation in Indonesia in relation to an ecosystem
1267 approach to fisheries management. *Marine Policy*, 91: 150-160.
1268

1269 Munthe, B.C. and Kapoor, K. (2018) 'Indonesian minister urged to stop destroying illegal
1270 fishing boats'. *Reuters* [online] available from [https://www.reuters.com/article/indonesia-](https://www.reuters.com/article/indonesia-fishing/indonesian-minister-urged-to-stop-destroying-illegal-fishing-boats-idUSL4N1P52D8)
1271 [fishing/indonesian-minister-urged-to-stop-destroying-illegal-fishing-boats-idUSL4N1P52D8](https://www.reuters.com/article/indonesia-fishing/indonesian-minister-urged-to-stop-destroying-illegal-fishing-boats-idUSL4N1P52D8)
1272 [accessed 28 June 2018]
1273
1274

1275 Palma, MA. et al. (2014) *Promoting Sustainable Fisheries : The International Legal and Policy*
1276 *Framework to Combat Illegal, Unreported and Unregulated Fishing*. BRILL: Leiden.
1277

1278 Parameswaran, P. (2017) 'Indonesia's War on Illegal Fishing Nets New China Vessel'. *The*
1279 *Diplomat* [online] available from [https://thediplomat.com/2017/12/indonesias-war-on-](https://thediplomat.com/2017/12/indonesias-war-on-illegal-fishing-nets-new-china-vessel/)
1280 [illegal-fishing-nets-new-china-vessel/](https://thediplomat.com/2017/12/indonesias-war-on-illegal-fishing-nets-new-china-vessel/) [accessed 28 June 2018]
1281
1282

1283 Parameswaran, P. (2017a) 'Indonesia's War on Illegal Fishing Continues With New Sinkings'.
1284 *The Diplomat* [online] available from [https://thediplomat.com/2017/11/indonesias-war-on-](https://thediplomat.com/2017/11/indonesias-war-on-illegal-fishing-continues-with-new-sinkings/)
1285 [illegal-fishing-continues-with-new-sinkings/](https://thediplomat.com/2017/11/indonesias-war-on-illegal-fishing-continues-with-new-sinkings/) [accessed 28 June 2018]
1286
1287

1288 Parameswaran, P. (2015) 'Explaining Indonesia's 'Sink The Vessels' Policy Under Jokowi'. *The*
1289 *Diplomat* [online] available from [https://thediplomat.com/2015/01/explaining-indonesias-](https://thediplomat.com/2015/01/explaining-indonesias-sink-the-vessels-policy-under-jokowi/)
1290 [sink-the-vessels-policy-under-jokowi/](https://thediplomat.com/2015/01/explaining-indonesias-sink-the-vessels-policy-under-jokowi/) [accessed 28 June 2018]
1291

1292 Petrossian GA (2015) 'Preventing illegal, unreported and unregulated (IUU) fishing: A
1293 situational approach'. *Biological Conservation* 189: 39-48.
1294
1295
1296
1297
1298

1299
1300
1301 Plakoyiannaki, E., & Stavradi, G. (2018) Collage Visual Data: Pathways to Data Analysis. In C.
1302 Cassell, A. Cunliffe and G. Grandy (eds.) *The Sage Handbook of Qualitative Business and*
1303 *Management Research* (chapter 19, volume 2). London: Sage, pp. 313-328.

1304
1305
1306 Presidential Regulation (2017) *Indonesian Ocean Policy*. Presidential Regulation of the
1307 Republic of Indonesia, Number 16, Year 2017.

1308
1309 Salim, T. (2015) 'Govt forms another anti-illegal fishing task force'. *The Jakarta Post* [online]
1310 available from [http://www.thejakartapost.com/news/2015/06/04/govt-forms-another-anti-](http://www.thejakartapost.com/news/2015/06/04/govt-forms-another-anti-illegal-fishing-task-force.html)
1311 [illegal-fishing-task-force.html](http://www.thejakartapost.com/news/2015/06/04/govt-forms-another-anti-illegal-fishing-task-force.html) [accessed 4 July 2018]

1312
1313 Salna, K. (2018) 'Google is Indonesia's powerful weapon in war on illegal fishing'. *The Jakarta*
1314 *Post* [online] available from [http://www.thejakartapost.com/life/2018/04/20/google-is-](http://www.thejakartapost.com/life/2018/04/20/google-is-indonesias-powerful-weapon-in-war-on-illegal-fishing.html)
1315 [indonesias-powerful-weapon-in-war-on-illegal-fishing.html](http://www.thejakartapost.com/life/2018/04/20/google-is-indonesias-powerful-weapon-in-war-on-illegal-fishing.html) [accessed 4 July 2018]

1316
1317 Sander, K. et al. (2014) 'Conceptualizing maritime environmental and natural resources law
1318 enforcement - The case of illegal fishing'. *Environmental Development*, 11: 112-122.

1319
1320 Siry, H.Y. (2011) 'In search of appropriate approaches to coastal zone management in
1321 Indonesia'. *Ocean & Coastal Management*, 54: 469-477.

1322
1323 Suryadarma, D., & Jones, G. W. (2013) Meeting the Education Challenge. In D. Suryadarma
1324 and G.W. Jones (eds) *Education in Indonesia*. Singapore: Institute of Southeast Asian Studies,
1325 pp.1-14.

1326
1327 Telesetsky, A. (2015) 'Scuttling IUU Fishing and Rewarding Sustainable Fishing: Enhancing the
1328 Effectiveness of the Port State Measures Agreement with Trade-Related Measures'. *Seattle*
1329 *University Law Review*, 38: 1237-1270.

1330
1331 UNDP [United Nations Development Programme] (2018) 'Sustainable Development Goals'
1332 [online] available from [http://www.undp.org/content/undp/en/home/sustainable-](http://www.undp.org/content/undp/en/home/sustainable-development-goals.html)
1333 [development-goals.html](http://www.undp.org/content/undp/en/home/sustainable-development-goals.html) [accessed 3 Jul 2018]

1334
1335 UNESCO [United Nations Educational, Scientific and Cultural Organization] (2018) Indonesia.
1336 <http://uis.unesco.org/en/country/id?theme=education-and-literacy> [accessed 26 September
1337 2019]

1338
1339 UN General Assembly (2015) *Transforming our world: the 2030 Agenda for Sustainable*
1340 *Development*, A/Res/70/1.

1341
1342 UN General Assembly (2008) *Report of the Secretary General, Oceans and the law of the Seas*.
1343 A/63/63.

1344
1345 UNODC (2011) *Transnational Organized Crime in the Fishing Industry. Focus on: Trafficking in*
1346 *Persons Smuggling of Migrants Illicit Drugs Trafficking*. [online] available from
1347 [http://www.unodc.org/documents/human-trafficking/Issue_Paper_-](http://www.unodc.org/documents/human-trafficking/Issue_Paper_-_TOC_in_the_Fishing_Industry.pdf)
1348 [_TOC_in_the_Fishing_Industry.pdf](http://www.unodc.org/documents/human-trafficking/Issue_Paper_-_TOC_in_the_Fishing_Industry.pdf) [accessed 9 January 2019]

1358
1359
1360
1361 UN (2002) Report of the World Summit on Sustainable Development. A/CONF.199/20*.
1362 Johannesburg. [online] available from <http://www.un-documents.net/aconf199-20.pdf>
1363 [accessed 10 January 2019]
1364

1365
1366 US NIC [United States National Intelligence Council] (2016) *Global Implications of Illegal,*
1367 *Unreported, and Unregulated (IUU) Fishing*. NIC WP 2016-02.
1368

1369 Vacchelli, E. (2018) 'Embodiment in qualitative research: collage making with migrant,
1370 refugee and asylum seeking women'. *Qualitative Research*, 18(2): 171-190.
1371

1372
1373 White, A.T., Christie, P., D'Agnes, H., Lowry, K., and Milne, N. (2005) 'Designing ICM projects
1374 for sustainability: lessons from the Philippines and Indonesia.' *Ocean & Coastal Management*
1375 48 (3-6): 271-296.
1376

1377 Widhiarto, H. (2014) 'Jokowi declares war on illegal fishing'. *The Jakarta Post* [online] available
1378 from [http://www.thejakartapost.com/news/2014/11/18/jokowi-declares-war-illegal-](http://www.thejakartapost.com/news/2014/11/18/jokowi-declares-war-illegal-fishing.html)
1379 [fishing.html](http://www.thejakartapost.com/news/2014/11/18/jokowi-declares-war-illegal-fishing.html) [accessed 28 June 2018]
1380

1381
1382 Williams, M.J. (2013) Will New Multilateral Arrangements Help Southeast Asian States Solve
1383 Illegal Fishing, *Contemporary Southeast Asia*, 35 (2); 258-283.
1384

1385 World Bank (2014) World Bank and Education in Indonesia.
1386 [https://www.worldbank.org/en/country/indonesia/brief/world-bank-and-education-in-](https://www.worldbank.org/en/country/indonesia/brief/world-bank-and-education-in-indonesia)
1387 [indonesia](https://www.worldbank.org/en/country/indonesia/brief/world-bank-and-education-in-indonesia) [accessed 26 September 2019]
1388

1389
1390 WTO (2013) Trade Policy Review. Report by the Secretariat. Indonesia. WT/TPR/S/278 (13-
1391 1138). [online] available from https://www.wto.org/english/tratop_e/tpr_e/s278_e.pdf
1392 [accessed 9 January 2019]
1393

1394 Yamazaki, S., et al. (2015) *Intra--and inter--village conflict in rural coastal communities in*
1395 *Indonesia: the case of the Kei islands*, University of Tasmania.
1396
1397
1398
1399
1400
1401
1402
1403
1404
1405
1406
1407
1408
1409
1410
1411
1412
1413
1414
1415
1416

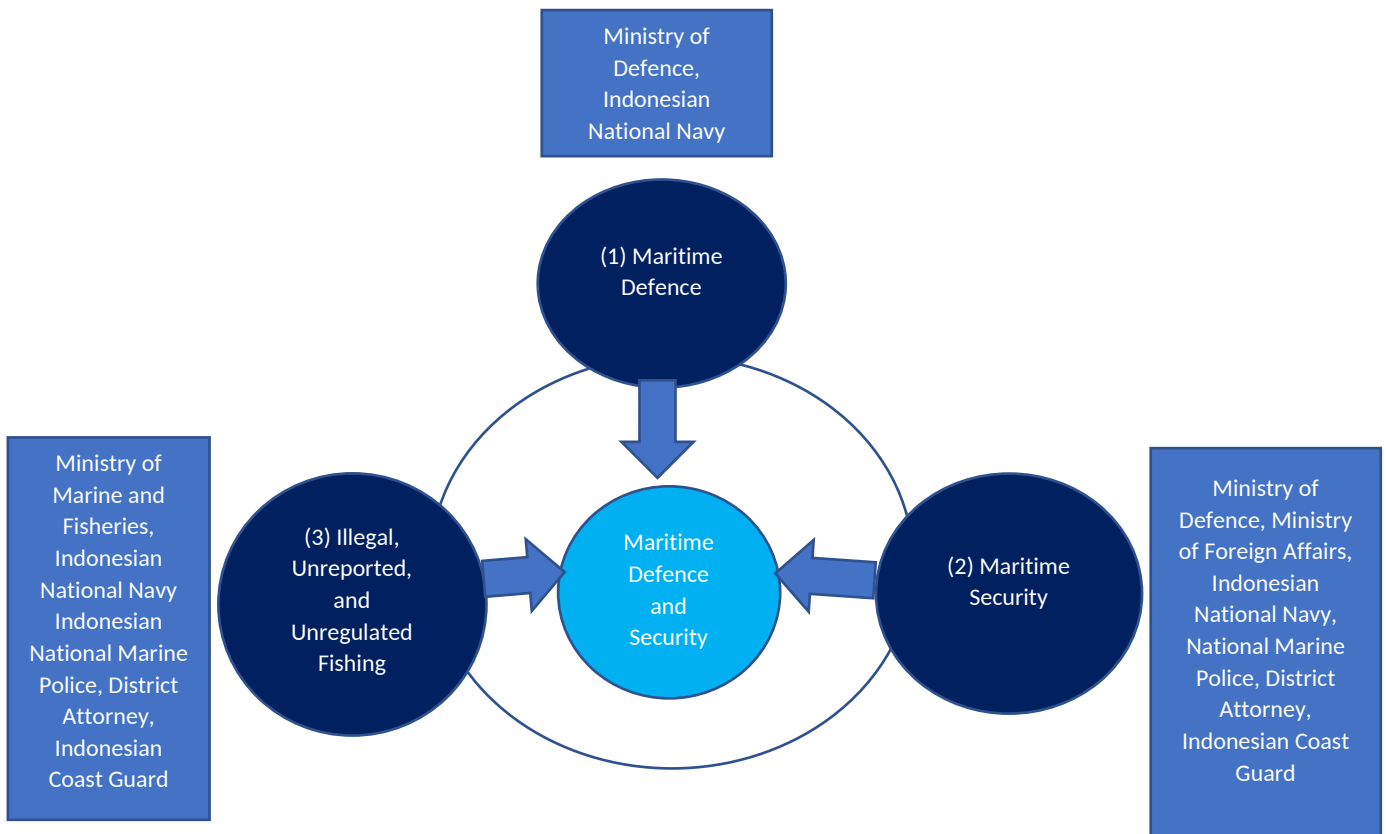
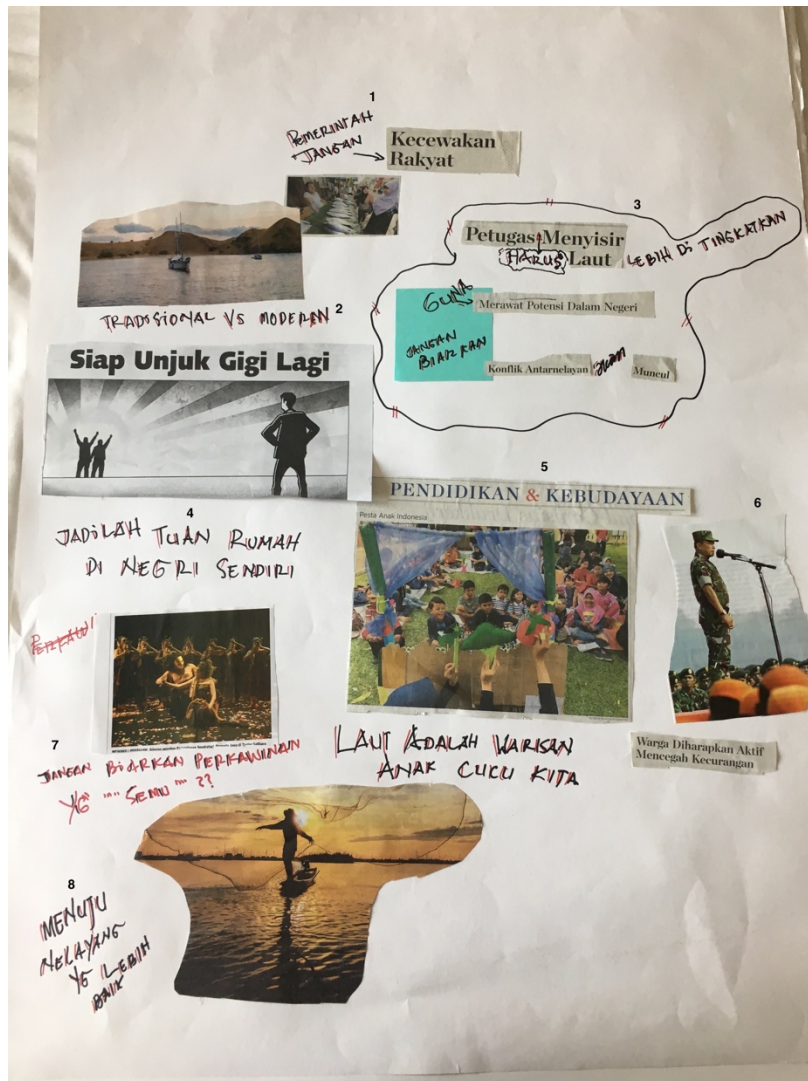


Figure 1: Indonesian maritime defence and security priority program - key priority activities and responsible/ related agencies (Source: Presidential Regulation 2017: 137)

Appendix: Collage Fishing Community Leader Indonesia (made in 2017)



1. Government: Please do not disappoint the people (us fishermen)
2. Traditional versus Modern: at sea the traditional fishermen are Indonesian while the modern fishermen are from abroad (with modern boats)
3. Maritime security officers should increase the marine patrol
4. Hopefully, we can enjoy the potential of our own natural resources
5. Education and Culture. The sea is the heritage for our grandchildren
6. The armed forces need to be proactive & the community needs to be involved to prevent crimes and actively attack fraud (corruption)
7. No fake marriages (migrants marrying local women)
8. Let's work (educate) towards becoming better fishermen; The ultimate goal is to have better future for all fishermen.