Rigs-to-Reef in Southeast Asia: Legal and policy issues

The Prospects for Rigs-to-Reefs in Southeast Asia
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I. Definition

II. The placement of Rigs-to-Reef: purpose is key

III. The flip-side: cheap disposal

IV. Location and context specific solutions

V. Implementation at national level

VI. Conclusion
I. Definitions

Rig-to-Reef is a process by which a disused offshore installation changes function and is re-used as an artificial reef.

An artificial reef is placed on the seabed to mimic functions of a natural reef such as protecting, regenerating, concentrating, and/or enhancing populations of living marine resources.
I. Definitions

However, UNCLOS does not discuss artificial reefs. An artificial reef is a man-made installation or structure installed on the seabed.

Different installations are built for different purposes and activities which will fall under different set of rules.

The purpose of an artificial reef will thus point to different applicable rules.
II. Rigs-to-Reefs placement: purpose is key

1. Fisheries management

**UNCLOS** - Sovereign rights and jurisdiction of the coastal States up to the outer limit of the EEZ, BUT

Obligation of conservation of the resources: maximum sustainable yield not overexploitation

Particularly relevant in a context where an artificial reef may attract specific fish species and fishermen

Authority in charge?
- at the time of placement
- for management, compliance and enforcement
II. Rigs-to-Reefs placement: purpose is key 2/3

2. Marine tourism

**UNCLOS** – Full jurisdiction of the coastal State in the TS and Exclusive rights for commercial uses in the EEZ, BUT

Obligation to protect and preserve the marine environment from all pollution sources, including rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

**Broad definition of pollution:** introduction of substances which results or are likely to result in such deleterious effects as harm to living resources and marine life ... 

Authority in charge? at the time of placement and for management, compliance and enforcement
## IV. Rigs-to-Reefs placement: purpose is key

### 3. Biodiversity protection

**UNCLOS** - Duty of the coastal State to protect the marine environment

**CBD** - Duty to identify, monitor, protect, restore, etc. (Difference between TS & EEZ)

### 4. Endangered species protection

**UNCLOS** - Duty of the coastal State to protect rare or fragile ecosystems and the habitat of depleted, threatened or endangered species

**CMS/Ramsar** – Reinforced obligation

**CITES Appendices** – Endangered species

Also IUCN red list
Examples of Threatened and Endangered species

Black coral (Anthipatharia spp), and Scleractinian coral, are protected under CITES (II)

Sea turtles Cheloniidae spp are protected under CITES Appendix I

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III. The flip-side: cheap and illegal disposal

How to guard against the risk of requalification of an artificial reef as disguised dumping?

1. International law provides for specific rules for dumping but there is no equivalent provisions for the many possible legitimate uses of the sea

2. EIA process needs to be built into the domestic licensing process authorizing activities

3. R2R program needs to be designed prior to the reef and authorization based on sound science and expected benefits must be monitored

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III. The flip-side: cheap and illegal disposal

IMO-UNEP 2009 Guidelines for the Placement of Artificial Reefs

- Seek to avoid that R2R be used to circumvent dumping rules
- Presented as a best practice
- Do not require use of virgin material
- Domestic regulations and institutional organisation are necessary
- Dumping regulation can be a starting point but more specific regs needed incl:
  - Environmental impact evaluation and cost-benefit
  - Compliance monitoring
  - Permit process with technical criteria (feasibility, functionality, durability and stability, suitability or monitoring program,
## IV. Location and context specific solutions

<table>
<thead>
<tr>
<th>Coastal States</th>
<th>Installations &gt; 30 years</th>
<th>Installations 20-30 years</th>
<th>Total per country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maritime zone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS/Archipelagic waters</td>
<td>EEZ</td>
<td>TS/Archipelagic waters</td>
<td>EEZ</td>
</tr>
<tr>
<td>Indonesia</td>
<td>169 (0)</td>
<td>170 (17)</td>
<td>356 (356)</td>
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<tr>
<td>Malaysia</td>
<td>63 (15)</td>
<td>45 (8)</td>
<td>209 (209)</td>
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<tr>
<td>Brunei</td>
<td>74 (48)</td>
<td>55 (19)</td>
<td>146 (146)</td>
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<td>Thailand</td>
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<td>80 (80)</td>
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<td>Vietnam</td>
<td>0 (0)</td>
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<td>12 (12)</td>
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<tr>
<td>China</td>
<td>1 (1)</td>
<td>23 (23)</td>
<td>24 (24)</td>
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<tr>
<td>Sub-total</td>
<td>306 (83)</td>
<td>270 (174)</td>
<td>833 (833)</td>
</tr>
<tr>
<td>Grand total</td>
<td>389 (444)</td>
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</tbody>
</table>

Values must be considered as indicative only due to known discrepancies between sources. Compiled from OPL World Offshore Field Development Guide Database, Vol 2: Asia, India, Australasia & Far East, 2010.
Location of offshore blocks and platforms
Shipping traffic in the seas of Southeast Asia
(National Center for Ecological Analysis and Synthesis from UC Santa Barbara)
IV. Location and context specific solutions

Bathymetry,
Seabed substrate,
Proximity to coast,
Commercial/artisanal fisheries,
Proximity to natural reefs,
Proximity to customary or official sealanes,
Physical circulation and weather patterns and risks,
Etc.
V. Implementation at national level

1. Laws and regulations on offshore decommissioning including clear responsibility over assets and

2. Laws on regulations on disposal at sea including offshore installations and structures

3. Laws and regulations on offshore installations must be suited to the new use for the R2R, specialized and specific

4. Clear Institutional responsibilities and process e.g. transfer from Ministry of energy/mineral resources to the Ministry of Environment or Fisheries

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V. Implementation at national level

5. No one size fits all solution: rigorous assessment mechanism needed

6. Marine spatial planning including habitat mapping, resource uses and other uses would be helpful
V. Implementation at national level
VI. Conclusion

- Artificial reefs for ecological and fisheries enhancement or the protection of endangered species are legitimate under international law

- Provided that the expected benefits are based on sound science and were defined prior to the placement

At national level:

- Clear domestic laws and institutional organization are needed

- Marine habitat mapping and marine spatial planning would assist the planning for artificial reefs
Thank you!

Questions?