

## ARTICLE

**Fisheries, Forests, and the Common Heritage of Mankind**

ANDREW PULLAR\*

The tragedy of the commons demonstrates that resources cannot be sustained if treated as the unregulated common property of all. Yet the decline in stocks of fisheries and forests in recent times illustrates the failure of treating resources as property, subject to the jurisdiction of states, to achieve sustainable management. In light of this, this article explores the merits of designating these resources as the Common Heritage of Mankind. This would entail international regulation of these resources in order to ensure that they are used in a non-exclusive manner, that the costs of over-exploitation are internalised to users and that the benefits of use are distributed among all humanity. The article contends that the Common Heritage of Mankind is a viable option for achieving sustainable management of resources. This is because the conflicting economic incentives that have contributed to lax state regulation would be avoided, states would be more easily held to account for unsustainable use and consistent regulatory standards could be established.

**I Introduction**

The quest for sustainable resource management poses a dilemma. The concept of the tragedy of the commons posits that individuals, when given access to unregulated common resources, will act self-interestedly, resulting in the depletion of these resources to the detriment of the whole group's long-term best interests.<sup>1</sup> The tragedy of the commons thus demonstrates that resources cannot be sustainably managed through being treated as the common property of all, because the profits of exploiting the resource are internalised while the costs are socialised. However recent decades have witnessed

---

\* Andrew Pullar studied a BA, LLB(Hons) conjoint degree at the University of Canterbury and wrote this article in his fourth year of study. He majored in Political Science and minored in Classical Studies.

1 Garrett Hardin "The Tragedy of the Commons" (1968) 162 Science 1243 at 1244.

the dramatic decline of stocks of both fisheries and forests, despite the fact both resources are managed through the use of property rights models based on state jurisdiction.

The Common Heritage of Mankind (CHM) is a concept whereby non-exclusive rights to use resources are regulated to ensure the costs of over-exploitation are internalised, and benefits of exploitation are shared equitably for the good of all mankind.<sup>2</sup> This essay considers whether CHM regimes provide a viable solution to the resource management dilemma. Part I discusses the failure of property rights models to lead to sustainable management of fisheries and forests. Part II considers the concept of the CHM and instances of its application. Part III analyses the benefits and difficulties of applying CHM regimes in the context of fisheries and forest management. The conclusion drawn is while practical issues will likely prevent this change occurring, in principle applying the CHM to these contexts is desirable.

## II A Resource Management Dilemma

### A Fisheries

Fish supplies are essential to the livelihood of 200 million people, mostly concentrated in the developing world.<sup>3</sup> World exports of fish and fish products reached USD 129.8 billion in 2011.<sup>4</sup> Usage of such an important resource needs to be sustainable. The legal regime governing fisheries is premised on the idea that allocating exclusive jurisdiction over fisheries to states will encourage them to use their fisheries sustainably. The tragedy of the unregulated commons is, in theory, avoided because the state has a long-term interest in sustaining the resource. Coastal states are given rights over fisheries within their Exclusive Economic Zone (EEZ) under the 1982 United Nations Convention on the Law of the Sea (UNCLOS).<sup>5</sup> Article 61(2) of UNCLOS creates a duty on states to ensure the living resources within their EEZ are not endangered from over-exploitation, but the means to achieving this end are left to the discretion of the state. States are required to set total allowable catch rates taking scientific data into account, but the scientific evidence does not need to be determinative in setting the rate.<sup>6</sup> The Fish Stocks Agreement (FSA)<sup>7</sup> attempts to mitigate gaps within the UNCLOS regime, and demonstrates a commendable change of focus from freedom of fishing on the high seas to conservation of fisheries.<sup>7</sup> However its utility is limited insofar as its provisions are mandatory only in relation to highly migratory stocks, and because the state is left as its own master.

---

2 See generally Graham Nicholson "The Common Heritage of Mankind and Mining: An Analysis of the Law as to the High Seas, Outer Space, the Antarctic and World Heritage" (2002) 6 NZJEL 177.

3 Nick Nuttall "Overfishing: a threat to marine biodiversity" United Nations <[www.un.org](http://www.un.org)>.

4 Food and Agriculture Organization of the United Nations *Fisheries and Aquaculture Statistics 2011* (2013) at xvii.

5 United Nations Convention on the Law of the Sea 1833 UNTS 3 (opened for signature 10 December 1982, entered into force 16 November 1994) [UNCLOS].

6 Richard Barnes "The Convention on the Law of the Sea: An Effective Framework for Domestic Fisheries Conservation?" in David Freestone, Richard Barnes and David M Ong (eds) *The Law of the Sea: Progress and Prospects* (Oxford University Press, Oxford, 2006) 233 at 242.

7 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 2167 UNTS 3 (opened for signature 4 December 1995, entered into force 11 December 2001).

This legal regime has proved inadequate to protect and conserve the world's fisheries. It is currently estimated that "over 70 [per cent] of the world's fish species are either fully exploited or depleted".<sup>8</sup> Faster increases in the price of fish relative to meat have meant fishing has expanded, leading to the collapse of some fish stocks and serious depletion of others.<sup>9</sup> In the last decade, stocks of fish including cod and flounder have declined by as much as 95 per cent.<sup>10</sup> Leaving states to set their own catch allowances has clearly not produced the intended sustainable outcomes. Part of the issue is scientific. The FSA requirement for states to identify and apply a maximum sustainable yield of fish is sound, particularly because the FSA requires that a precautionary approach be taken in doing this, but imprecise science has reduced the effectiveness of the measure. Flawed science has led to unsustainable catch levels being allowed and subsequently found to be dramatically harmful.<sup>11</sup> A further issue is fishermen avoiding restrictions on catches, causing an increase in illegal, unreported and unregulated fishing worldwide.<sup>12</sup> High subsidies for fishing have further exacerbated the issue by incentivising involvement in the industry. However well intentioned, this legal regime is clearly proving inadequate to preserve fisheries for future generations.

Another part of the issue is the conflicting incentives created by the regime. While sustainable use is in all users' long-term interests, immediate profit incentives favour exploitation. The EEZ regime requires states to set total allowable catch rates, and to allow foreign vessels to take any remaining catch.<sup>13</sup> This means that rather than avoiding a tragedy of the commons, unsustainable overuse is incentivised. Because science does not have to be determinative in setting allowances, states can set unsustainable targets to enhance short term economic growth.<sup>14</sup> States have expanded domestic fishing efforts to fill the gaps left by foreign vessels, and foreign vessels have relocated to the high seas, meaning stocks there are placed under intense pressure.<sup>15</sup> Thus the domestic tragedy of the commons still occurs, and an international tragedy of the commons is accelerated.<sup>16</sup> Further, the regime does not hold states to account for failing to meet their obligations. In part, this is because the terms of reference for states for managing EEZ resources are so wide that unsustainable practices are effectively legalised.<sup>17</sup> Moreover, the fact that conservation and management issues are outside the compulsory dispute settlement provisions of UNCLOS makes enforcement of obligations considerably more difficult.<sup>18</sup>

The failure of the current international legal regime governing fisheries illustrates that allocating property rights has not prevented the tragedy of the commons issue occurring in fishing. This creates a resource management dilemma. If neither commons-style non-exclusive ownership nor allocating property rights to states will lead to sustainable management of fisheries, what alternative legal mechanisms exist to govern this important resource? The CHM is an alternative scheme for managing common areas which

---

8 Nuttall, above n 3.

9 Nuttall, above n 3.

10 Nuttall, above n 3.

11 Beckie Zisser "Cod Numbers Disappoint Fishermen and Scientists" (10 January 2012) OCEANA <[www.usa.oceana.org](http://www.usa.oceana.org)>.

12 Nuttall, above n 3.

13 UNCLOS.

14 Barnes, above n 6, 242.

15 At 241.

16 At 241.

17 At 239.

18 At 239.

could be a viable option for fisheries management. In particular, the international institutional structure to fisheries management a CHM regime would entail could have substantial potential for success.

## B *Forests*

The law relating to forests is also illustrative of the failure of state property rights to lead to sustainable management of a resource. The earth's forests fulfil a number of vital functions. They absorb solar radiation better than any other land cover. They moderate temperature, use carbon dioxide, produce oxygen, capture pollutants, purify rainwater, prevent erosion and are conducive to speciation.<sup>19</sup> The Amazon alone "produces 50 per cent of the world's oxygen and a substantial part of the world's fresh water and biodiversity".<sup>20</sup> Yet deforestation has occurred at alarming rates for decades. The current rate of tropical deforestation is around 0.7 per cent per year.<sup>21</sup> The forests remaining in Western Europe are under 0.8 per cent of original levels.<sup>22</sup> "More than one-fifth of the world's tropical forests have been cleared since 1960."<sup>23</sup> The harms of deforestation are significant. Forest depletion effects include changing biospheric functioning, reducing numbers of species, disrupting patterns of solar energy absorption and releasing carbon dioxide.<sup>24</sup> The effects on weather patterns including increased instances of droughts, hurricanes, rainstorms and temperature deviations as well as the destruction of capital causes monetary losses of a greater magnitude than the profits of deforestation.<sup>25</sup>

Despite their importance, the international legal framework surrounding forests is somewhat confused. Forests are located within national boundaries, and thus are under the exclusive jurisdiction of the state to exploit under ordinary international law principles. Much forest regulation has therefore occurred domestically and been market-driven, through programs oriented toward development of forestry as a productive economic sector rather than conservation.<sup>26</sup> The development of international regulation of forestry has therefore been unsubstantial and tentative.<sup>27</sup> The Forest Principles established in 1992 at the United Nations Conference on Environment and Development are explicitly non-binding, and affirm the sovereign right of states to exploit their own resources from the first principle.<sup>28</sup> Fifteen years of negotiations within the United Nations Forum on Forests

---

19 Nicholas Guppy "International Governance and Regimes Dealing with Land Resources from the Perspective of the North" in Oran R Young, George J Demko and Kilaparti Ramakrishna (eds) *Global Environmental Change and International Governance* (University Press of New England, Hanover, 1996) 136 at 138.

20 Ikechi Mgbeoji "Beyond Rhetoric: State Sovereignty, Common Concern and the Inapplicability of the Common Heritage Concept to Plant Genetic Resources" (2003) 16 LJIL 821 at 835 (footnotes omitted).

21 "Deforestation and the Unsustainable Use of Forests" Global Development Research Centre <www.gdrc.org>.

22 "Deforestation and the Unsustainable Use of Forests", above n 21.

23 "Deforestation and the Unsustainable Use of Forests", above n 21.

24 Guppy, above n 19, at 139.

25 At 139.

26 Ronnie D Lipschutz "Why Is There No International Forestry Law?: An Examination of International Forestry Regulation, both Public and Private" (2000) 19 UCLA J Envtl L & Poly 153 at 153.

27 Catherine P MacKenzie "Lessons from Forestry for International Environmental Law" (2012) 21 RECIEL 114 at 116.

28 *Report of the United Nations Conference on Environment and Development A/CONF151/26* (Vol III) (1992) at [1(a)] and [2(a)].

led to the conclusion of yet another non-binding agreement in 2007.<sup>29</sup> International institutions have not successfully protected forests. The International Tropical Timber Organisation has failed to prevent unsustainable logging, perhaps because exporters and consumers of timber are allocated the most votes within the organisation.<sup>30</sup> The Convention on Biological Diversity<sup>31</sup> began a programme of work on forest biological diversity in 2002<sup>32</sup> but this effectively involves the programme proposing guidance on activities to address the problems facing forests while leaving states to set their own priorities.<sup>33</sup> The World Bank funds a number of forestry projects, but allocates more spending toward projects harmful to forests.<sup>34</sup> Meanwhile, the World Trade Organisation has contributed to the acceleration of deforestation by eliminating protectionism, thus incentivising timber exporters to increase supply to enlarge their profits. Inadequate governance and illegal logging have also frustrated conservation efforts.<sup>35</sup>

In light of the failure of states to either sustainably manage deforestation on their own or establish an international institution to regulate forests externally, it is interesting to consider whether applying the CHM concept could provide a workable solution to the unsustainable levels of deforestation. Similar issues influencing the effectiveness of fisheries regulation apply to forests, including state accountability and achieving effective regulations. Yet the issue in this context is different because the resource in question is located directly within national borders.

### III The Common Heritage of Mankind

Areas beyond national jurisdiction have traditionally been considered either *res communes* or *res nullius*. *Res communes* spaces are the property of all, available for non-exclusive enjoyment. However *res communes* are susceptible to degradation, because states are incentivised to over-exploit common resources, thus internalising the benefits of use while socialising the costs.<sup>36</sup> The tragedy of the commons occurs because states have no incentive to regulate their use to avoid degradation.<sup>37</sup> *Res nullius* spaces may be appropriated via effective occupation, but this encourages a harmful “competitive scramble for sovereign rights”.<sup>38</sup>

The concepts of *res communes* and *res nullius* originate from a world of abundance, where all states had an equal ability to exploit common resources. However inequality arises from developed states’ relatively superior technological capacity to exploit resources, and their scarcity.<sup>39</sup> Therefore a new approach to managing resources of such areas is necessary.

---

29 *Non-legally binding instrument on all types of forests* GA Res 62/98, A/Res/62/98 (2007).

30 Guppy, above n 19, at 141.

31 Convention on biological diversity 1760 UNTS 79 (opened for signature 5 June 1992, entered into force 29 December 1993).

32 “COP 6 Decision VI/22: Forest biological diversity” Convention on Biological Diversity <[www.cbd.int](http://www.cbd.int)>.

33 “Background” Convention on Biological Diversity <[www.cbd.int](http://www.cbd.int)>.

34 Guppy, above n 19, at 144.

35 MacKenzie, above n 27, at 115.

36 Kemal Baslar *The Concept of the Common Heritage of Mankind in International Law* (Kluwer Law International, The Netherlands, 1998) at 44–46.

37 Hardin, above n 1, at 1244.

38 Nicholson, above n 2, at 181.

39 Baslar, above n 36, at 44–46.

The CHM concept is an alternative that mitigates these issues. The theoretical origins of the concept trace back at least as far as Immanuel Kant, who wrote that the expansion of cooperation with regard to rights to the use of “the *earth’s surface*, which belongs to the human race in common”, would bring humanity closer to a cosmopolitan constitution.<sup>40</sup> The CHM is “a revolution ... in international relations by changing the structural relationship between rich and poor countries”.<sup>41</sup> Where the CHM applies, international institutional arrangements will generally be required to administer a regulated right of non-exclusive enjoyment for the area, aiming to ensure equity in the distribution of benefits of enjoyment.<sup>42</sup> Use rights are regulated to ensure the costs of over-exploitation are internalised by states to prevent its occurrence. The CHM is an alternative approach to the management of international spaces, recognising the common interest humankind has in maintaining globally significant areas. The content of CHM regimes has generally involved five elements. States have non-exclusive rights of enjoyment of the designated resources; they cannot be subject to public or private appropriation. Use of the area is regulated by an international management structure, to avoid the tragedy of the unregulated commons.<sup>43</sup> The benefits of using the resources are shared equitably among all states, thus internalising the costs of exploitation. The area may only be used peacefully, thus incentivising cooperation by preventing states from defending their interests in the resources.<sup>44</sup> Finally, the resources subject to the CHM regime are to be preserved.

#### *A Application of the CHM*

CHM regimes have been implemented within the legal regimes applying to both outer space and the deep seabed. The 1967 Outer Space Treaty does not refer to the CHM, though it refers to Outer Space as the “common interest” and “province” of mankind.<sup>45</sup> The 1979 Moon Treaty specifically invokes the CHM,<sup>46</sup> though due to its minimal number of signatories it cannot be said to be the definitive law for the Moon. Both provide for principles generally identified with CHM regimes including shared benefits and peaceful use.<sup>47</sup> Because of the inaccessibility of their subject-matter, neither treaty offers much illumination on CHM regimes in practice.

Of greater assistance is the CHM regime for the deep seabed. This originated with a declaration of the UN General Assembly designating the deep seabed as the CHM, informed by principles including peaceful use, shared benefits and international

---

40 Immanuel Kant “Toward perpetual peace” in Mary J Gregor (ed) *Practical Philosophy* (Cambridge University Press, Cambridge, 1999) 311 at 329.

41 Arvid Pardo “Third World Lecture 1984: Ocean Space and Mankind” (1984) 6 TWQ 559 at 568–569.

42 Nicholson, above n 2, at 177–178.

43 Jeffrey Loan “The Common Heritage of Mankind in Antarctica: An Analysis in Light of the Threats Posed by Climate Change” (2004) 1 NZYL 149 at 160.

44 At 163.

45 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies 610 UNTS 8843 (opened for signature 27 January 1967, entered into force 10 October 1967).

46 Agreement governing the activities of States on the moon and other celestial bodies 1363 UNTS 3 (opened for signature 18 December 1979, entered into force 11 July 1984), art 11.

47 Loan, above n 43, at 154.

management.<sup>48</sup> The CHM regime for the deep seabed was set up within UNCLOS. UNCLOS established the International Seabed Authority (ISA) to govern the deep seabed, and designated all rights to the area's resources to mankind as a whole.<sup>49</sup> After initially refusing, developed states joined UNCLOS after the passing of the 1994 Annex to Part XI, which gave states involved in seabed mining a greater role in the ISA and abolished compulsory technology transfer, thus compromising the equality underlying the regime.<sup>50</sup>

### B *The CHM and preservation of the resource*

A fundamental question when considering whether to extend the application of the CHM to threatened resources such as fisheries and forests is whether the concept is capable of preserving the resource. There is an apparent tension between the CHM principles of preserving the resource and sharing the benefits of exploitation. These can be reconciled by interpreting the principles as promoting exploitation of the resource at a sustainable rate. Unfortunately the issue is not so simple. The rationale of developing states involved in negotiating UNCLOS in designating the deep seabed as CHM was primarily to ensure that developing states would be able to benefit from the deep seabed's exploitation, rather than to promote conservation.<sup>51</sup> Meanwhile, developed states argued in favour of maintaining "traditional freedoms of use". The primary issue for both was access to resources.<sup>52</sup> These motivations are expressed in art 150 UNCLOS, which provides that states must have regard for the "healthy development of the world economy". Thus conservation was not paramount in states' minds when they elected to establish this CHM regime.

However the Seabed Disputes Chamber has taken a preservation-oriented stance on the responsibilities and liabilities of states in relation to the deep seabed.<sup>53</sup> The Chamber's advisory opinion on states' responsibilities when undertaking activities on the deep seabed reflected several principles of international environmental law, including requirements of "due diligence", taking a precautionary approach and undertaking environmental impact assessments.<sup>54</sup> Most importantly, states must consider "the interests of mankind as a whole" and "act in good faith".<sup>55</sup> Failure to do so may be challenged.<sup>56</sup> The Chamber also found the ISA may take action against states on behalf of mankind.<sup>57</sup> This advisory opinion is a significant normative contribution from the Chamber, essentially meaning the *Lotus* principle does not apply to activities affecting the CHM.<sup>58</sup>

---

48 *Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction* GA Res 25/2749, A/Res/25/2749 (1970) at [6].

49 UNCLOS, art 156.

50 Nicholson, above n 2, at 186.

51 Loan, above n 43, at 163.

52 At 163.

53 *Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area: Advisory Opinion* (International Tribunal for the Law of the Sea, ITLOS Reports 2011, 1 February 2011).

54 At [242].

55 At [230].

56 UNCLOS, art 187(b)(i).

57 Article 137(2).

58 The principle effectively says sovereign states may act however they wish so long as they do not contravene a specific prohibition. See *SS 'Lotus' (France v Turkey)* [1927] PCIJ (series A) No 10; and Peter Holcombe Henley "Minerals and Mechanisms: The Legal Significance of the

This represents a strong inclination toward protection of the CHM. If the Chamber's example is followed in all CHM contexts, the concept would undoubtedly be preservation-oriented in principle. Moreover, the creation of the law of the sea regime under UNCLOS has correlated to a reduction in deep seabed mining. "Commercial interest in [mining the] deep seabed ... dwindled" after UNCLOS, despite earlier enthusiasm,<sup>59</sup> and the first ISA mining licenses have only recently been sought and granted. This reflects the reality that the CHM reduces incentives to exploit by reducing profitability.<sup>60</sup> Sharing of the benefits of exploitation among all states serves to internalise exploitation costs, thus avoiding the commons' degradation.<sup>61</sup> Establishing an institution to manage the CHM area has thus provided a range of benefits. The ISA regulates use of resources within the CHM area, monitors activities and can enforce states' responsibilities against them through being empowered to act on behalf of mankind.<sup>62</sup> The ISA also sets universal standards for activity, and coordinates scientific research on the area and resources to ensure decisions are fully informed.<sup>63</sup> Moreover, it is not exposed to the conflicting incentives to exploit resources for short-term economic growth that states are subjected to. This allows for considerably more effective regulation and goes some way to avoiding the conflicts of interest and pitfalls of scientific inaccuracy evident where states have regulated fisheries and forests. Overall, the seabed experience indicates that in practice, CHM regimes can be preservation-focused and informed by sound international environmental law principles.

#### IV Applying the Common Heritage of Mankind

In considering whether a CHM regime could be applied in other contexts, it is worth noting there are general difficulties with using the concept. The idea and application of the CHM is politically charged. Throughout the UNCLOS negotiations, the content of the regime was secondary to its bargaining value.<sup>64</sup> States were motivated by self-interest. Developing states sought equitable sharing of the benefits of seabed exploitation because they lacked the capacity to exploit it themselves. Further, because developing states are the biggest exporters of minerals, they sought to compensate themselves for any drop in mineral values from increased supply.<sup>65</sup> Developed states only joined UNCLOS after significant amendments to the provisions surrounding the ISA and only when it appeared UNCLOS would achieve sufficient ratifications to take effect.<sup>66</sup> It is used as a rhetorical tool of

---

Notion of the 'Common Heritage of Mankind' in the Advisory Opinion of the Seabed Disputes Chamber" (2011) 12 Melbourne Journal of International Law 373 at 389.

59 L Dolliver M Nelson "Reflections on the 1982 Convention on the Law of the Sea" in David Freestone, Richard Barnes and David M Ong (eds) *The Law of the Sea: Progress and Prospects* (Oxford University Press, Oxford, 2006) 28 at 34.

60 Note that this incentive may fade in the future if advances in technology improve the economic efficiency of extraction.

61 Loan, above n 43, at 162.

62 UNCLOS, art 137(2).

63 Satya Nandan "Administering the Mineral Resources of the Deep Seabed" in David Freestone, Richard Barnes and David M Ong (eds) *The Law of the Sea: Progress and Prospects* (Oxford University Press, Oxford, 2006) 75 at 91.

64 Edward Guntrip "The Common Heritage of Mankind: An Adequate Regime for Managing the Deep Seabed?" (2003) 4 Melbourne Journal of International Law 376 at 380.

65 At 380.

66 Malcolm D Evans "The Law of the Sea" in Malcolm D Evans (ed) *International Law* (3rd ed, Oxford University Press, Oxford, 2010) 651 at 676.



convenience by developed states to claim resources located within developing states' borders, and by developing states to deny others the right to exploit common areas.<sup>67</sup> Both groups attempt to invoke it in an asymmetric manner, seeking for profits to accrue to themselves while socialising costs.

Moreover, the concept has only been applied to the governance of the last frontiers of the world, which are largely inaccessible. This means that foregoing the freedom to exploit is of little direct cost. Arguably, this means states will be less willing to agree to apply CHM schemes to more accessible resources. Furthermore, its content is still somewhat uncertain due to it having only been implemented a small number of times. This is a double-edged sword: if its content remains vague states will be more likely to agree to its application, yet this would also risk the CHM being reduced to merely political or rhetorical relevance.<sup>68</sup> Nonetheless, if implemented successfully CHM regimes have the potential to ensure sustainability in the use of resources and to hold states accountable for unsustainable usage more effectively.

#### A Fisheries

As discussed above, the ISA is illustrative of the benefits of an international institution being established to manage resources. The ISA coordinates scientific information about the area, sets universal standards for activity, and can act against non-compliant states on behalf of mankind.<sup>69</sup> International institutional coordination in this manner would be extremely beneficial for the fisheries regime. The primary problems with the regime as it stands are a lack of effective state accountability and conflicting incentives, inconsistent and broad standards being adopted and the failure of the regime to prevent depletion. An international institution authorised to govern fisheries for the benefit of mankind would go far towards mitigating these problems.

The accountability issue stems from the fact states remain their own masters under the current fisheries regime. There is no higher regulatory power to answer to, as states are empowered to set their own regulations. This creates a conflict of interest for states insofar as precautionary approaches bring less short-term profit than exploitation. Traditional rules of state responsibility are of limited assistance in this context as state obligations are non-reciprocal, so there is no breach of an obligation owed to another state to base a claim on.<sup>70</sup> Further, there is currently no right for another state to bring an *actio popularis* at international law.<sup>71</sup> However the issues surrounding state responsibility would be avoided if an international institution charged with governing fisheries in the interests of mankind could be empowered to take claims against states on the behalf of mankind, in the manner of the ISA.

Inconsistency between states' fisheries standards and regulations enables fishermen to avoid fishing restrictions by changing where they fish, thus undermining protection measures.<sup>72</sup> An institution could coordinate universal minimum standards to mitigate this. Further, it would more successfully ensure stricter liability because it would not be exposed to the incentive bearing on self-regulating states to make wide regulations to

---

67 Mgbeoji, above n 20, at 827.

68 Loan, above n 43, at 153.

69 UNCLOS, art 137(2).

70 Catherine Redgwell "International Environmental Law" in Malcolm D Evans (ed) *International Law* (3rd ed, Oxford University Press, Oxford, 2010) 687 at 697.

71 At 697. An *actio popularis* is an action brought in the interest of the international order.

72 Food and Agriculture Organization of the United Nations, above n 4.

avoid liability. Moreover, an institution could mitigate fishery collapse through centrally coordinating fishing entitlements of states in a manner ensuring sustainable use of the resource and equitable distribution of catches. Coupled with coordination of scientific data, this body could update standards across regions to account for fluctuations in stocks.

However fisheries are used far more frequently than the seabed is explored or mined. The frequency of use would entail enormous difficulties in enforcement. A potential policy to make enforcement easier would be to set rotations between available and prohibited fisheries for set periods.<sup>73</sup> Banning fishing in specific areas has been found to dramatically assist the recovery of depleted fisheries while simultaneously increasing the species in the area and fish levels in adjacent fisheries.<sup>74</sup> An international institution would be well placed to coordinate such a rotation system globally. Enforcement would be easier because any vessel in a prohibited area would clearly be in breach.

Cooperation could be problematic. States may be unwilling to cooperate with and provide resources to an external institution restricting their rights and potentially reducing their economic performance. If setting sustainable levels of allowable catches means decreased supply of fish, consumers would likely bear the loss. This would disproportionately harm the one in five people in developing states reliant on fish as a primary source of protein.<sup>75</sup> Yet considering the dire state of fish stocks in many places, this could be an unfortunate necessity, short of governments subsidising the price of fish for consumers' benefit.

There is significant potential for a CHM regime to successfully apply in a fisheries context. An international institution coordinating fisheries regulations with the authority to enforce standards against states would mitigate many of the flaws evident in the current legal framework for fisheries. Such an institution would be able to coordinate scientific data to ensure all fisheries' catch allowances are updated for the fluctuations often experienced in fisheries. Practical issues may prevent success in reality. States are unlikely to agree to curtail their control over fishing, considering the size of the industry; at least not to any effective extent. Moreover, such an institution would face an enormous task considering the prevalence of fishing comparative to seabed mining, and would require substantial funding to be effective. This would potentially not be forthcoming from states which will have an interest in such a body being ineffective. Nevertheless, the application of a CHM regime to govern fisheries is a sound idea in principle. If allowable catch rates were informed by principles such as equitable distribution and preservation, sustainability would be the institution's priority and the catch could be allocated according to need as opposed to the highest bidder. Therefore the developing world reliant on fish need not be deprived.

## B *Forests*

Whether a CHM regime could apply to forests raises the question of whether CHM regimes are compatible with sovereign rights of states over resources within their territory. Considering many resources of global importance are located within state borders, like forests, it is a substantial limitation on the versatility of the CHM concept if it cannot apply to such areas. Despite this, the CHM has traditionally been conceived as inapplicable over

---

73 Food and Agriculture Organization of the United Nations, above n 4.

74 Food and Agriculture Organization of the United Nations, above n 4.

75 Food and Agriculture Organization of the United Nations, above n 4.

resources subject to state sovereignty.<sup>76</sup> Theoretically, the principles of sovereign equality and non-intervention within a state's territory give the state the right to exploit the resources within their territory, and thus the CHM cannot apply where it would qualify that right.<sup>77</sup> It is therefore notable that the CHM has only been applied regarding the last frontiers of the earth, which are not and have never been subject to the sovereignty of any state.<sup>78</sup> However the idea of applying the CHM to areas within national jurisdiction is not new. It has been suggested in such contexts as the Amazon and plant genetic resources; both found within state boundaries.<sup>79</sup>

A CHM regime would be compatible with sovereignty rights and could therefore apply to resources within state boundaries if sovereign rights over territory and use rights over the resources are separated. "Such an approach recognises that CHM is concerned with resource management, rather than territorial management."<sup>80</sup> A state's right to exploit its own resources is not unqualified. States already voluntarily separate sovereignty and use rights in a number of contexts, including regarding minerals and protected species.<sup>81</sup> Further, state sovereignty over activity within their borders is restricted by international duties including the no harm principle.<sup>82</sup>

Although states' rights to exploit important resources within their territory are limitable, the position is still problematic. CHM regimes go further than restricting use rights insofar as they require the subject resource be shared equitably for the benefit of all states. This aspect of the CHM is not consistent with sovereignty. However it is arguable equitable sharing of benefits is not a necessary aspect of the concept where it could apply to resources within state boundaries. Regarding forests, the rationale behind invoking the CHM concept is preservation, not creating opportunities for exploitation. This variation for the concept for application within state borders may make it more acceptable to states in control of the resources in question, because exploitation rights are not lost to other states. Further, this qualification would prevent developed states making opportunistic claims that the CHM applies to resources within other states' borders with the intention of exploiting resources for financial gain.<sup>83</sup> The general test for applying the concept would thus be more fittingly concerned with the nature of the resource rather than its location. Therefore the principle of non-appropriation, properly conceived, is a condition for an area to be *res communes* rather than a pre-condition for resources to be subject to a CHM regime.<sup>84</sup>

CHM regimes could therefore, at least in this context, be construed as a form of trust. Legal title and entitlement to use the resource would be separated, and the legal owner could be responsible for setting sustainable allowances of exploitation of the resource. The trust analysis is fitting because many of the principles informing the CHM concept are

---

76 Malcolm N Shaw *International Law* (6th ed, Cambridge University Press, Cambridge, 2008) at 534.

77 Mgbeoji, above n 20, at 828–829.

78 At 831.

79 At 835.

80 Loan, above n 43, at 160.

81 The Convention on Biodiversity is one such example. Guppy, above n 19, at 156–157.

82 The obligation not to allow use of their territory in a manner causing harm outside their borders, originating in Jan Hostie, Charles Warren and RAE Greenshields "Trail Smelter Arbitral Tribunal" (1939) 33 AJIL 180 at 182; and codified in instruments such as *Report Of The United Nations Conference On Environment And Development* A/CONF.151/26 (1992).

83 Mgbeoji, above n 20, at 826–827.

84 Alexandre Kiss "The common heritage of mankind: utopia or reality?" (1985) 40 *International Journal* 423 at 433.

analogous to trustee duties, including rational use and good management of the resource and preserving its value for future generations.<sup>85</sup> An analogous legal precedent for such an arrangement is the “Public Trust Doctrine” from resource management law in the United States.<sup>86</sup> The idea of the doctrine is that some resources are so permeated “with the public interest that they are subject to a perpetual trust that excludes private ownership”.<sup>87</sup> It has been used to justify reallocation of water rights for environmental and recreational purposes. In the seminal Mono Lake case, the California Supreme Court held a state agency that had issued a permit to divert water from the tributaries to a lake “had failed to consider the public’s interest in the environment and recreational values of the lake”.<sup>88</sup> As such, the agency had a duty to reallocate the water subject to the permit in a manner consistent with the public trust and associated interests.<sup>89</sup> “In 2000, the Hawaiian Supreme Court also held that vested water rights were subject to the public trust.”<sup>90</sup> While the genesis of the doctrine was ensuring public access to the seashore and preventing private ownership of resources, rather than the affirmative protection of threatened resources, it is nonetheless a useful precedent for the successful application of trust principles to natural resources.

The same benefits of having an international institution administer fisheries would apply equally here. State responsibility would be more easily guaranteed, better standards could be set which internalise the true costs of deforestation, and forests would be substantially better protected. Considering the range of environmental issues deforestation creates and exacerbates, and the lack of a coordinated international governance structure for forest preservation, applying a CHM regime to forests has substantial potential to be successful. Again, practical issues pose the biggest problem. So far, all international instruments which administer forests have been non-binding, which can cause problems for these instruments’ enforceability.<sup>91</sup> Resourcing issues may not be as insurmountable in this context considering that the number of states responsible for unsustainable deforestation is not as prolific as the number of states that fish. This could mean states have less incentive to underfund the institution to prevent it being effective. However this could raise political issues considering the states harmed most by the regime would be developing states simply imitating the earlier deforestation undergone by developed states in their path to industrialisation. Enforcement would also likely pose an issue. Yet in principle the application of a CHM regime is still a desirable alternative to the current legal framework.

---

85 At 435.

86 William L Andreen “The evolving contours of water law in the United States: Bridging the gap between water rights, land use and the protection of the aquatic environment” (2006) 23 EPLJ 5 at 16. See also Alexandra B Klass and Ling-Yee Huang *Restoring the Trust: Water Resources and the Public Trust Doctrine, A Manual for Advocates* (Centre for Progressive Reform, White Paper 908, September 2009).

87 Andreen, above n 86, at 16.

88 Andreen, above n 86, at 16; and *National Audubon Society v Superior Court* 658 P 2d 709 (Cal 1983).

89 Andreen, above n 86, at 16; and *National Audubon Society v Superior Court*, above n 88.

90 Andreen, above n 86, at 16; and *Re Water Use Permit Applications for Interim Instream Flow Standard Amendments, and Petitions for Water Reservations for the Waiahole Ditch* 9 P 3d 409 (Haw 2000).

91 See MacKenzie, above n 27, at 120–122.

## **V Conclusion**

Considering the politically charged nature of the concept, it is unlikely that the CHM will ever be applied to fisheries and forests. States will not be willing to agree to such a substantial restriction on their rights in relation to regularly used resources. Beyond the practical issue however, the CHM provides a sound solution to the resource management dilemma caused by the failure of property rights to lead to sustainable resource management. It may be that fishery collapse and the harms of deforestation make the CHM a more politically viable option in the future.