S
ould valuable natural resources pay for their right to survive on the planet? This may seem a strange question, but many environmental policy makers believe that they should. This article explores a new scheme designed to protect whale species from harvesting for human consumption or scientific research. The scheme aims to harness the ‘market power’ of consumers who are willing to pay for whales not to be caught.

To understand why the scheme has been devised we need to look at recent attempts to reduce the global catch of whales, and why they have been ineffective.

**Why are whales still being caught?**

Whales are iconic mammals. People all over the world marvel at their beauty and their size (most whales are large). They are familiar to us — we see them in wildlife documentaries and in aquariums, and people will pay a lot of money to watch them swim in the wild.

But not everybody values whales in this way. In some cultures the consumption of whale meat (and blubber) is normal practice. For these people, killing whales is acceptable in an ethical sense. They are happy to spend part of their income on purchasing whale meat to eat.

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Paying to keep whales
A case study of biodiversity protection

Noel Castree

Can threatened resources be protected by consumer power rather than legislation? A recent idea suggests that, if enough consumers believe certain resources are worthy of protection, those resources can ‘pay for their own survival’. This article describes a recent proposal to price the right of whales to live, and assesses its prospects for success. The case study is relevant to A-level topics that cover biodiversity under threat, sustainability and resource consumption.
In the mid-1970s the radical environmental organisation Greenpeace launched a ‘save the whales’ campaign. This brought the differences between anti- and pro-whaling arguments into sharp relief. Forty years on the debate still rages and there is no resolution in sight. In the meantime attempts have been made to reduce the number of whales caught each year. However, critics feel that these have been far too weak.

Regulating whaling
Since 1946, the whale industry has been regulated by an inter-governmental body called the International Whaling Commission (IWC). It currently has members from 88 countries. In 1986, following the success of the Greenpeace campaign a decade earlier, the IWC imposed a blanket ban on all commercial whaling. It permitted continued whale harvesting by ‘indigenous’ (traditional) peoples in countries like Canada, in recognition of their right to be culturally different.

Has the ban worked?
The ban has only been partly effective. According to critics, the number of whales harvested by a few countries — Japan, Norway and Iceland — remains too high. In fact, the number killed is now twice as high as it was 15 years ago. This is because at the turn of the millennium the over-harvesting of the early 1980s had led to a reduction in the number of mature whales, and the catch went down (see Box 1).

Today records show that around 2,000 whales are caught per annum, but the real figure could be higher. Norway and Iceland simply ignore the ban, while Japan uses the excuse of ‘scientific research’ to stay within the letter but certainly not the spirit of the IWC regulations. Though some whale species are now largely free from commercial exploitation, others are harvested at levels anti-whalers consider far too high (see Tables 1 and 2, p.24).

Why does whaling continue?
Why has governmental regulation failed to eliminate commercial whaling?
■ In the countries mentioned above the consumption of whales remains culturally important, as it does in those indigenous communities the IWC allows to whale.
■ In countries morally opposed to whaling — like the UK — whaling is not an important political issue when compared to things like trade or energy security. As a result, countries like the UK have not imposed meaningful penalties on the major whaling nations. Nor have they paid the money necessary to ensure that there is a robust system in
place to monitor the exact number of whales caught each year. In short, the IWC lacked the resources and tools to translate its mid-1980s policy decision into effective action.

**Trading to protect the environment**

Around the time of the Greenpeace ‘save the whales’ campaign a group of economists suggested a way of protecting the non-human world from harm without the need for direct governmental regulation. These ‘environmental economists’, as they soon became called, argued that one could trade **environmental bads** for **environmental goods**.

In other words, they reasoned that if enough people valued things like wild tigers they would be willing to pay those who valued such creatures dead not to kill them.

The people who wanted to protect the tigers, in theory, hail from anywhere in the world.

Only recently has this approach been suggested as a solution to the continued problem — as the IWC and anti-whalers see it — of over-whaling.

A new approach to saving whales

Writing in the world-leading journal *Nature*, three US academics have recently outlined a scheme to make it too costly for whalers to continue to harvest whales commercially. Christopher Costello, Leah Gerber and Steven Gaines (2012) explain their scheme as follows.

1. First, the IWC would agree an annual ‘cap’ on global whale catches.
2. Second, each IWC member would be allocated a certain proportion of the catch quota (e.g. 1% or 25%).
3. Third, all members would then have three options. They could choose not to use their allocation, they could choose to defer its use for a year, or they could choose to give it to one or more parties (e.g. whalers or whale conservation organisations).
4. Fourth, these parties could either exercise the right to harvest whales or could sell this right to willing buyers.

This scheme would mean that the number of whales harvested per annum would depend on how much of the global quota was used and who in the end the quota was used by.

For instance, an anti-whaling organisation like the Sea Shepherd Conservation Society (the SSCS) might purchase a quarter of Iceland’s annual quota. This money would go directly to sailors and onshore processors who rely on whaling to make a living. They would be compensated for whaling less than they

Table 1  Global whale catch by IWC members, 1982–83 (just before the ban on commercial whaling)

<table>
<thead>
<tr>
<th>Area/country</th>
<th>Bowhead</th>
<th>Bryde’s</th>
<th>Fin</th>
<th>Grey</th>
<th>Humpback</th>
<th>Minke</th>
<th>Sei</th>
<th>Sperm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antarctic</td>
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<td></td>
<td></td>
<td>6,447</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>625</td>
<td></td>
<td></td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td>120</td>
<td></td>
<td>8</td>
<td>15</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>1</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark (Greenland)</td>
<td>8</td>
<td>15</td>
<td></td>
<td>144</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>244</td>
</tr>
<tr>
<td>Faroes and West Indies</td>
<td>4</td>
<td>5</td>
<td></td>
<td>1</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Iceland</td>
<td>144</td>
<td>5</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>244</td>
</tr>
<tr>
<td>Japan</td>
<td>536</td>
<td></td>
<td></td>
<td>393</td>
<td></td>
<td></td>
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<td></td>
<td>929</td>
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<td>USA</td>
<td>9</td>
<td>2</td>
<td></td>
<td>11</td>
<td></td>
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<tr>
<td>USSR</td>
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<td>168</td>
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<td></td>
<td>168</td>
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<tr>
<td>Philippines</td>
<td>9</td>
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<td>9</td>
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<tr>
<td>Peru</td>
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<td>149</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>149</td>
</tr>
<tr>
<td>Chile (scientific purposes)</td>
<td>3</td>
<td>1</td>
<td></td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>697</td>
<td>278</td>
<td>170</td>
<td>16</td>
<td>7,072</td>
<td>100</td>
<td>414</td>
<td>8,756</td>
</tr>
</tbody>
</table>

Source: Secretariat of the IWC

Table 2  Global whale catch by IWC members, 2008–09 (more than 20 years after the ban on commercial whaling)

<table>
<thead>
<tr>
<th>Area/country</th>
<th>Bowhead</th>
<th>Bryde’s</th>
<th>Fin</th>
<th>Grey</th>
<th>Humpback</th>
<th>Minke</th>
<th>Sei</th>
<th>Sperm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctic (Japanese catch)</td>
<td>1</td>
<td></td>
<td></td>
<td>680</td>
<td>14</td>
<td>681</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark (Greenland)</td>
<td>3</td>
<td>10</td>
<td></td>
<td>168</td>
<td>814</td>
<td>206</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iceland</td>
<td>125</td>
<td></td>
<td></td>
<td>484</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>484</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>165</td>
<td>101</td>
<td>1</td>
<td></td>
<td>317</td>
</tr>
<tr>
<td>West Indies</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>16</td>
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<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Japan</td>
<td>50</td>
<td></td>
<td></td>
<td>165</td>
<td>101</td>
<td>1</td>
<td>1</td>
<td></td>
<td>317</td>
</tr>
<tr>
<td>Korea</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
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<tr>
<td>Former USSR</td>
<td></td>
<td></td>
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<td>116</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>116</td>
</tr>
<tr>
<td>USA</td>
<td>38</td>
<td>116</td>
<td></td>
<td>1,594</td>
<td>101</td>
<td>1</td>
<td></td>
<td></td>
<td>2,040</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>50</td>
<td>136</td>
<td>116</td>
<td>1</td>
<td>1,594</td>
<td>101</td>
<td>1</td>
<td>2,040</td>
</tr>
</tbody>
</table>

Source: Secretariat of the IWC

Note: Some IWC members ceased whaling after 1985, hence the difference from Table 1.
would otherwise do. The SSCS would achieve its ethical objectives directly, rather than having the IWC act as an intermediary.

If enough organisations and individuals paid enough money to dissuade whalers from whaling, in the long run whaling might become a thing of the past. According to Costello, Gerber and Gaines, the power of anti-whaling consumers could outweigh the market power of those who consume whale meat and blubber.

A market in whale lives: the arguments

Strengths

What are the plus-points of the scheme outlined above? Think about the IWC ban.

- It has worked for some species (notably minke whales).
- It has created a moral stand-off: the IWC’s majority of anti-whaling countries wish to change the behaviour of countries like Norway.

In this light, the scheme proposed by Costello, Gerber and Gaines has four advantages.

- First, it incentivises whaling nations to reduce their whale catch over time. It uses a ‘carrot’ rather than ‘stick’ approach.
- Second, it is morally neutral. It creates a means whereby pro- and anti-whaling countries, organisations and individuals can realise their objectives through market transactions. By setting up a cap and trade scheme for whales, the IWC could avoid antagonising whaling nations and act as an honest broker between pro- and anti-whaling interests.
- Third, there are precedents that suggest the proposed scheme might work to reduce whale harvests, for example successful schemes to reduce sulphur dioxide emissions in the USA and over-fishing in New Zealand.
- Fourth, anti-whaling organisations currently spend about $25 million a year on publicity and activities designed to highlight the cruelty of whaling. If one looks at the current price of whale meat and blubber, that money could be better spent saving hundreds of whales in the cap and trade scheme detailed above. The money spent on campaigning is doing little to reduce whale catches, even as it sways the hearts and minds of millions of people who oppose whaling (but who can do little to strengthen the IWC).

Weaknesses

Despite the above arguments in favour of the idea, the concept of consumers paying to keep whales alive is not problem-free.

- First, it presumes that those involved in whaling are willing to compromise their cultural beliefs and way of life in order to acquire money.
- Second, establishing the correct annual cap on whale harvests is technically demanding. Whales are mobile and often highly dispersed. Determining the population size of each whale species is very tricky indeed. As a result, determining what is a ‘sustainable catch’ per whale species is challenging.
- Third, like all cap and trade schemes, the proposed whale scheme rests on what are called ‘counter-factual’ assumptions. It...
assumes that whales not caught in any given year would have been caught had not an organisation like Sea Shepherds paid money. But by definition this assumption cannot be proven since only if additional whales had been harvested could it be verified.

Fourth, what happens if enough consumers can no long afford to pay to keep whales alive? For instance, when economic recessions and depressions hit, people and organisations have far less disposal income to spend.

**Would the scheme work?**

These four problems aside, let us suppose that the IWC chose to implement the proposed scheme from 2016. After all, its blanket ban has failed to eliminate large-scale whaling and it is surely time to try something new. To what degree would a new market in whale life and death reduce global harvests?

There is a good chance that the major whaling nations would sell a meaningful portion of their quota to anti-whaling groups. Whaling is difficult — it is expensive and demanding of time and energy. Receiving payments to whale less would surely incentivise many whalers in Japan, Iceland and Norway (among others). It would also give them the time to explore other options for making a living.

However, if the IWC progressively lowered the annual cap and more rigorously monitored whale catches there is the risk of price inflation. As whale meat and blubber became scarce, prices might rise, making it more costly for anti-whalers to participate in the trading scheme. At the same time, a large black market could emerge in which whalers earned extra income by catching and selling whales illegally.

In the long run it is unlikely that commercial whaling could be entirely eliminated. Many individuals and organisations, like the Sea Shepherds, regard this as ethically unacceptable in any case. However, if the scheme proposed by Costello, Gerber and Gaines were to reduce whale catches by even 25% that would surely be success of a kind.

**Questions for further discussion**

1. Can you think of a way that the IWC could reduce the number of whales caught globally without implementing the scheme suggested by Costello, Gerber and Gaines? In other words, is direct governmental regulation of whaling still an option?
2. If a new black market in whale meat and blubber were to emerge as the cap was lowered over time, what would the IWC need to do to eliminate it?

3. In your view, is consumers spending money a good way for people to express their ethical preferences? Should some things be too valuable to have a price placed on them?

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**Key points**

- Recent shifts in environmental policy worldwide invite consumers to pay for the conservation of environmental goods.
- Recently, one such policy has been suggested as a way to reduce the ongoing problem of too many whales being caught per annum.
- The policy places an annual cap on the global whale catch, divides the catch into shares, and allows pro- and anti-whaling organisations and individuals to enter into monetary transactions with each other. Anti-whalers can thus pay whalers not to catch so many whales in future.
- Though the proposed policy contains a number of flaws, it stands a good chance of reducing the global whale catch by several hundred per annum in the short to medium term.