5. Different approaches to decommissioning

5.1 Inter-country comparisons

175. Historically most countries choosing to adopt a decommissioning scheme have set their objectives primarily towards the reduction of fishing capacity rather than to effort. This is the case for all the countries within the EU with the possible exception of Denmark. This country's, scheme has been so successful (as a result of the industry being faced with severe economic difficulties) that it is now able to target particular groups of fishermen undertaking the greatest amounts of effort. It is able to target specific fisheries such as industrial fishing vessels and Baltic cod trawlers.

176.All the EU countries, except the UK, adopt a system based on fixed rates. For the most part these directly follow the EU guidelines and may be either more generous (Spain and France) or less (Ireland).

177.Most countries outside the EU have evolved from traditional fixed systems to either a bidding system linked primarily to revenue and by implication effort (USA and Canada), or an individual quota system. In Australia, evidence has shown that when the two schemes operate in tandem, the interest in decommissioning reduces.

178.Table 5.1 identifies the main constituents of the schemes. There are a number of points that should be highlighted from this analysis. Firstly, priorities are set according to the most efficient vessels, or the oldest vessels and fishermen, or to both. Particular schemes or priorities can be introduced which target specific fisheries. There is no evidence to suggest that when setting larger budgets (Canada) that the uptake would have been any higher than it would have been with significantly lower budgets. Whilst Canada set an ambitious target of reducing the number of active licences to 800, it actually decommissioned only 392 vessels, and removed 12 per cent of capacity rather than the intended 30 per cent.

179.There are two examples from the schemes listed from which lessons can perhaps be learned. The first is in the New England Groundfish fishery (FCRP). This scheme has a bidding system and subsequently scores the bids against the average revenues recorded from the vessels:

Example1

The owner of vessel A submits a bid for $ 200,000. The average annual revenues for the best 3 out of 4 years (1991-1994) are $ 225,000.

Step A. Bid = $ 200,000.

Step B Ave.Rev + $ 200,000+$225,000+$250,000 / 3 =225,000

Step C Score = $ 200,000/$ 225,000 =0.888

Example 2

The owner of vessel B submits a bid for $ 200,000 (the same as vessel A). However, the average annual revenues for the best 3 out of 4 years (1991-1994) are $ 283,333.

Step A. Bid = $ 200,000.

Step B Ave.Rev + $ 200,000+$300,000+$350,000 / 3 =283,333

Step C Score = $ 200,000/$ 283,333 =0.75

Example 3

The owner of vessel A submits a bid for $ 350,000. The average annual revenues for the best 3 out of 4 years (1991-1994) are $ 600,000.

Step A. Bid = $ 350,000.

Step B Ave.Rev + $ 500,000+$600,000+$700,000 / 3 =600,000

Step C Score = $ 350,000/$ 600,000 =0.583

Even though the bid for vessel C is higher than that of vessels A and B, vessel C scores lower because of its high performance. Consequently, vessel C is selected over vessel B and vessel B selected over vessel A.

180. This New England system therefore, encourages value for money since the original bid is competitive (as with the UK scheme) but is assessed on the grounds of earning capacity.

181.Another alternative is to examine the Danish system which sets priorities according to certain criteria. These change over the years (Appendix 5.1). The applications are weighted according to pre-defined priorities, such as age of vessel, species composition in the catch, the age of the owner, fishing days at sea and the size of the vessel.

182.An example is given below

Priorities for decommissioning grants for April 1991 tranche
(Vessels gaining 13 points would achieve decommissioning.)

Criteria	Points
Age of vessel	
> 20 years	3
10 - 20 years	2
Capacity development of port -	cancelled
Species composition in catch	
A > 75 in the first half of the year of: cod caught in the Baltic	6
B > 75 in 3 quarters of a year of: cod, haddock & saithe	5
C > 75 in 3 quarters of the year for	4
Age of the owner	
	0
Fishing days per year	
226 <=	6
150 - 225	5
100 - 149	4

Source: An appraisal of the effects of the decommissioning scheme in the case of Denmark and the Netherlands, LEI, 1995

183. The Danish scheme theoretically allows all those interested in decommissioning to bid, but assesses the bids against its set criteria. This could prove attractive to the UK since fishermen do not like to be prohibited from applying by virtue of the segment in which they operate. It also links in reasonably well with the current rules for MAGP IV.

184. There is also one interesting feature in the Dutch decommissioning scheme. If a decommissioning award is made, the monies are paid in stages: first payment within four weeks of withdrawal; second payment after 12 months; and third payment after 24 months. However, this scheme is a fixed rate scheme and not linked to tendering.

Table 5.1: Summary of decommissioning schemes adopted in other countries

Country	*Budget*	*Targets Effort*	*Targets Cap*	*Priorities*	*Selection Criteria*	*Assessment criteria*	*Alternative policy tools adopted*	*Uptake*	*Strengths*
CANADA (East coast)	Large e.g. $1.9 bn in 1994-1999	*	*	**early retirement for fishers over 55; vessels using fixed gear; multi purpose licences**	Historical fish catches or historical earnings (best of 3 years (83-92)	**Reverse auction determined on the basis of Catch history**	Restrictive licensing; Closed fisheries	10 % (392 vessels)	Large budget; Awards linked directly to effort
USA (New England)	$ 23 M	*	*	**vessels specifically targeting groundfish (more than 65 %)**	Scoring system based on average annual Revenues.	**Bid divided by the average best 3 out of 4 previous years**	Restrictive licensing regime	10 %	Directly targets the highest earning vessels
CANADA (Pacific salmon fishery)	$ 4 M	*		**Priority given to particular fishing methods**	Scoring system	**Competitive bid Maximum level set - $ 100,000**		22 %	
AUSTRALIA	$ 3 M industry funded		*	**Prawn fishermen**	Fixed rates based on engine power and hull volume	**Fixed rates**	Individual transferable quotas	7 %	Uptake reduced by the success of the ITQ system
AUSTRALIA	$ 5 M		*	**Abalone fishermen**	Fixed rates	**Fixed rates**	Individual transferable quotas	10 %	Uptake reduced by the success of the ITQ system
DENMARK	113 M ECU	*	*	**Higher priorities given to vessels with more than 250 days at sea, more than 30 years, larger vessels and owner's age**	Scoring system	**Fixed rates**		22 %	
HOLLAND		*	*	**Standard EU system**	Fixed rates	**Fixed rates**		5 %	Uptake reduced by the success of the ITQ system
FRANCE	40 M ECU		*	**Standard EU system, higher premiums given for higher kWs**	Fixed rates	**Fixed rates**			
IRELAND	£2 M		*	**Standard EU system, higher premiums given for younger vessels, excludes special category whitefish vessels**	Fixed rates	**Fixed rates**		1 %	
SPAIN			*	**Standard EU system**	Fixed rates	**Fixed rates**		23 %	Scrap & build scheme (2:1)

5.2 Other alternative possibilities

185. When the UK scheme was introduced it incorporated the system of VCUs. This followed extensive research by the Seafish Industry Authority which identified VCUs as the most appropriate measure of fleet capacity[1]. Other traditional measures, such as tonnage, were extremely variable and could not be used to accurately reflect a vessel's fishing capability. Seafish subsequently suggested additional measures[2] that would seek to target the most efficient vessels in the fleet. Two methods were suggested. The first was adding the days at sea to the VCU system, VCU days, thereby taking account of effort; the second was to introduce at a later stage Multi Criteria or Data Envelopment Analysis (DEA).

186. The former would have taken account of effort but detracted from the EU goal of removing capacity.

187. The implementation of DEA, would require each bidder for tender to be a decision-making unit (DMU), with single input (the tender price) and a variety of outputs, e.g. the resulting reductions in a variety of capacity and effort measures. As these should later represent the Fisheries Departments' objectives for stock conservation and MAGP segmented capacity and effort targets, rather than the owner's DMU objectives, a ranking measure proportionate to overall efficiency (OE) is appropriate. This allows capacity to be weighted against effort, segment, or any other characteristic.

188. Seafish have subsequently expressed concern that the use of VCUs, as an indicator of performance, has lost its value[3]. The principal concern is that as a result of the application of the licence aggregation criteria, the construction of vessels, and in particular those under 24 m, is being manipulated so that the physical characteristics become distorted in order to comply with the formula. The make-up of the new vessel, often including structural adjustments outwith the formula (such as depth), adds, new performance criteria which are excluded from the VCU calculation. As an alternative, Seafish recommend the use of Gross Tonnage (GT) * kW as a means of determining the bid. This follows from an analysis sponsored by Seafish[4] which shows that more capacity and effort would have been removed in previous decommissioning schemes, within budget, had an alternate calculation been applied.

189. The current UK scheme is transparent in design. As a result fishermen are over-familiar with the system and find it increasingly easy to predict the likelihood of success at increasingly higher rates. If any vessel satisfies the qualification criteria and meets with the overall ceiling, as determined by the Minister, then there is no reason to assume that the applicant would be unsuccessful. In many ways, the scheme has become too predictable and if amendments were to be made, it might prove worthwhile to introduce an element of uncertainty into any future selection mechanism.

190. However, Fisheries Departments are hindered by Parliamentary procedure and cannot introduce a system which is deemed to be too secretive. It has to fit the criteria of being 'objective or defensible'. However, within the confines of this restriction, there are some ways of increasing the uncertainty in the knowledge of competitive bids. This could be achieved by:

- adding to the criteria used in determining constituents of the decommissioning scheme, for example VCU*days or track records. In this case the individual allocations would not be known to the competitors
- introducing an alternative selection methodology or establishing a scoring system

[1] Tucker. C, the role of VCUs in effort limitation, Seafish Technical Report 344, 1992
[2] Tucker. C Effort Control, decommissioning and licence aggregation, 1992
[3] Submission from the Seafish Industry Authority to the consultation exercise on the UK fishing vessel decommissioning scheme, 11 April 1996.
[4] Court and Jones 1994 & Frafjord, 1996. Seafish Internal working documents.

191. An example of a potential scoring system is shown below:

This applies the formula of more than one selection criteria. Examples are shown below

$$\frac{\textit{bid submitted}}{\textit{tonnage (GT) * power kW* segment* activity factor}}$$

$$\textit{activity factor} = \frac{\textit{total number of days at sea in the last 2 years}}{}$$

Source: Seafish

192. The choice of components in the assessment is open to suggestion and like the Danish system can seek to incorporate priorities or retain the existing capacity measures. The DEA outlined above is similar but perhaps more complex than the US system.

5.3 The tendering process

193. Examples of the bidding system in both the UK and New England have been shown to be highly effective. The accepted bids were still well below the capital valuation for most applicants. Many in the industry also recognised, that in terms of value for taxpayers money, there was little to be said against the approach.

194. However, an alternative to the current UK scheme is strike pricing based on the non discriminatory price auction system. In this system, fishermen bid in the usual way, but Government pays the same price per VCU, where the price is pitched at the highest acceptable bidder's price. Under this system it is anticipated that fishermen would enter very competitive (i.e. low) bids in the hope of securing their chances of being selected. In such cases they would stand to receive more, (in some cases substantially more) than the value of their bid.

195. A concern about this approach is that marginal vessels would benefit disproportionately from the higher set price paid by Government. It is also likely that whilst the budgetary allocation to decommissioning remains small in relation to the capital value of the industry (between 4 and 6 per cent depending on whether licence values are included in the capital valuation), vessels with higher market values (as a result of their ability to sell licences or track records) will still formulate their bids based on the true market rate. This would mean that those segments with correspondingly high market values (beam trawl and pelagic) would be less likely to apply.

196. The concept of strike pricing was not tested within the survey. It was thought to be too complex an issue for fishermen to explore within the limited time frame of a telephone questionnaire. Empirical research[5] suggests that strike pricing may act as a significant barrier to non specialists, whilst specialists (for example fish selling agents and licence brokers) might be more prone to collude. This is because the risks of not succeeding with such a system may be larger. It is obvious from the survey responses that collusion (i.e. 'knowledge of previous decommissioning bids' and 'expected size of competing bids)' is already an intricate part of the process in determining tenders (Table 2.6). If the empirical research is borne out, a change in tendering methodology to strike pricing would exacerbate the collusion.

[5] Freidman, M How to sell government securities, Wall Street Journal 1991 Aug 8 A8

Appendix 5.1 Priorities for decommissioning grants, 1987 - 1990

(Vessels gaining 13 points would achieve decommissioning.)

Criteria	Points			
	1987	1988	1989	1990
Age of vessel				
	6	5		4
15-25 years		3	3	
Capacity development of port				
Esbjerg and Bornholm		0	0	
Hirtshals and Skagen	1		0	0
A. > 75 of: cod, haddock, saithe, hake, salmon, sprat, Norway pout, sand eel, or		5	5	
B > 75 of: cod, haddock, saithe, plaice, hake, turbot, salmon, sprat, Norway pout, sand eel, blue whiting, brown shrimp, Norway lobster,	4	4		5
C > 75 of B in 3 quarters of the year		3	3	
Number of fishing days				
> 250		5	5	
150 - 250	0		4	5
	0	0		2
The age of the owner				
	5	5		2
50 - 60 with only 1 vessel		4	4	
40 - 49 with only 1 vessel	2		3	0

(Vessels gaining 13 points would achieve decommissioning.)

Criteria	
Age of vessel	
> 20 years	
10 - 20 years	2
	cancelled
Species composition in catch	
	6
B > 75 in 3 quarters of a year of: cod, haddock & saithe	
C > 75 in 3 quarters of the year for	4
	0
Fishing days per year	
	6
150 - 225	
100 - 149	4

than 9 points were not taken into consideration. The scheme was subsequently altered to give priority to vessels fishing for reduction. They required only 8 points.

Priorities for decommissioning grants from 1992-1993

Criteria	Points	
	1992	1993
Age of the vessel	3	3
Older than 30 yrs	2	2
20 - 30 years	1	0
10 - 19 years		
Species composition in catch		
A The value of the following species relative to the value in per cent divided by 10: cod, haddock, saithe, sprat, sole, nephrops, deep sea prawn)		
B. The value of all other species than A relative to the value in per cent divided by 20		
The age of the owner		
Over 25		1
Fishing days per year		
250<=	4	4
199 - 249	3	3
150 - 199	2	2
100 - 149	1	1
Size of the vessel		
- 50 GRT	1	
. 50 GRT	3	
6 - 8.99 m		1
9 - 11.99 m		1
12.0 - 15.99 m		1
16.0 - 19.99 m		0
20 - 23.99 m		0
24 - 29.99 m		5
30.0 - 39.99 m		4
40.0 - 49.99 m		1
50 m >		1

Source: An appraisal of the effects of the decommissioning scheme in Denmark and the Netherlands, LEI, 1995