

# A FRESH LOOK – SOME FURTHER THOUGHTS FROM THE SECRETARIAT ON THE FINANCIAL CONTRIBUTIONS SCHEME

## Part 1

### INTRODUCTION

#### Areas of agreement to date

The Task Force proposed, and the Commission agreed, that a new contributions formula should be based on the four *guiding principles* of: openness, stability, fairness and user pays.

It has also been agreed that the following four elements at least should be included in a new contributions formula: an annual membership component; a wealth component/capacity to pay; consumptive use (whaling); and meeting attendance, i.e. size of delegations at Annual Meetings. These are described in Table 1.

At IWC/54, the Commission agreed that Models 7 and 8 should form the basis of further consideration in finalising the new contributions scheme (see Tables 2 and 3).

#### Remaining issues

While some agreement has been reached on each of the four elements to be included in a new contributions formula, further and not insignificant issues remain to be resolved. These are summarised in Table 1.

The two areas where the Task Force (and the Commission) is having particular problems in reaching agreement are:

1. how each of the elements should be weighted, i.e. the percentage contribution each element makes to the total)  
- some ranges have been discussed and these are given in Table 1;
2. how consumptive use should be treated.

With respect to weighting of the elements, some ranges have been used by the Task Force and these are given in Table 1.

With respect to treatment of consumptive use, different preferences exist among the Task Force members. Some would prefer to continue to recognise different types of whaling, while others would prefer to treat all whaling equally. A request from the Task Force to the Commission (via the Contributions Sub-committee and the F&A Committee) for policy guidance on this issue at IWC/54 merely served to illustrate that the Task Force's views reflect those of the wider IWC membership. Rather than providing policy guidance, the Commission gave the work back to the Task Force and instructed it to '*consider how whaling should be described taking into account the following points:*

- *The difference between ASW and other whaling is a matter of scale;*
- *That there is no rational difference between ASW and other whaling;*
- *For ASW, the primary purpose is subsistence rather than profit;*
- *All whaling is equal;*
- *Whaling includes all whaling that has an economic return thus the definition includes commercial, scientific and bycatch;*
- *Local use should be treated differently to commercial use;*
- *Scientific whaling contributes valuable data to the IWC; and*
- *Bycatch is not whaling*

*and to propose how whaling could be weighted in any final contributions scheme'.*

So, not only does the Task Force have to return to this issue, it also has to consider if (and how) bycatch (incidental catches *and ship strikes?*) should be included as part of the 'whaling' element.

The Commission also requested the Task Force to develop proposals including and excluding whalewatching and small cetaceans. However, it did not provide guidance on whether:

- watching of small as well as large cetaceans should be considered;
- consideration of 'small cetaceans' covers both direct and incidental takes.

Other issues for the Task Force to address include:

- A review of the definitions for economic groupings of countries;
- How the elements within a contributions formula are combined within a model.

With respect to the economic grouping of countries, at least one country (Monaco) is unhappy with the definitions agreed by the Task Force at its meeting in Antigua and Barbuda in March, believing it to be unfair to countries with small economies but with large per capita incomes. In Shimonoseki it was agreed to keep this issue open, and Frederic Briand has submitted a revised proposal for the Task Force to consider at its December meeting (Document TF/DEC 2002/02). Further thoughts are also presented by the Secretariat in the second part of this document.

With respect to how the elements of a formula should be combined, Models 7 and 8 remain on the table for discussion as indicated above.

### **A POSSIBLE WAY FORWARD?**

As is evident from the paragraphs above, there are many issues remaining to be resolved, particularly in view of the additional work imposed by the Commission in Shimonoseki.

In an attempt to assist and structure the discussions of the Task Force when it meets in December, the Secretariat felt that it might be useful to look afresh at the work to revise the contributions scheme paying particular attention to the guiding principles previously agreed.

Part 2 of this document provides this 'fresh look'. It involves some re-examination of certain aspects of the contributions scheme on which there is broad agreement but also suggests approaches on how to handle issues related to treatment of whaling and the inclusion (or not) of whalewatching and small cetaceans as requested by the Commission.

Table 1. Summary of (1) the current status of discussions on elements to be included in a new contributions scheme and (2) the remaining issues

'Elements'	Current status of discussions	Remaining issues
<b>Annual Membership</b>	Should be set at a level to reflect a real commitment to the organisation without creating an obstacle to membership by developing countries. It will include participation of up to two (or three?) delegates per country at the Annual Meeting.	<ul style="list-style-type: none"> <li>What % of the total contribution the Annual Membership fee should represent. The Task Force has considered a range of 10-40%</li> </ul>
<b>Wealth Component/ Capacity to Pay</b>	<p>Countries should be placed in four Groups using a combination of two economic measures, GNP and GDP/capita as follows:</p> <ul style="list-style-type: none"> <li>Group 1: GNP &lt; US\$ 10 billion <b>and</b> GDP/capita &lt; US\$ 10,000</li> <li>Group 2: GNP &gt; US\$ 10 billion <b>and</b> GDP/capita &lt; US\$ 10,000</li> <li>Group 3: GNP &lt; US\$ 1,000 billion <b>and</b> GDP/capita &gt; US\$ 10,000</li> <li>Group 4: GNP &gt; US\$ 1,000 billion <b>and</b> GDP/capita &gt; US\$ 10,000</li> </ul> <p>However, at least one country (Monaco) is unhappy with this grouping believing that it is unfair to countries with small economies but large per capita incomes.</p>	<ul style="list-style-type: none"> <li>At least one country (Monaco) has objected to the current economic groupings since it considers that it is unfair to countries with small economies but large <i>per capita</i> incomes. Frederic Briand proposes some revisions in document TF/DEC 2002/02. Further thoughts are also presented by the Secretariat in the second part of this document.</li> <li>What % of the total contribution the wealth component should represent. The Task Force has considered a range of 30-50%.</li> </ul>
<b>User pays</b>	<p><b>Consumptive Use</b></p> <p>This should be based on the number of whales caught in the preceding year, expressed as 'minke whale units'.</p> <p>No agreement has yet been reached on whether all whaling should be treated equally or whether there should be differentiation between different whaling types (e.g. aboriginal subsistence whaling and 'other').</p>	<ul style="list-style-type: none"> <li>Review of minke whale conversion formula</li> <li>At IWC/54 the Commission instructed the Task Force to '<i>consider how whaling should be described taking into account the following points:</i> <ul style="list-style-type: none"> <li><i>The difference between ASW and other whaling is a matter of scale;</i></li> <li><i>That there is no rational difference between ASW and other whaling;</i></li> <li><i>For ASW, the primary purpose is subsistence rather than profit;</i></li> <li><i>All whaling is equal;</i></li> <li><i>Whaling includes all whaling that has an economic return thus the definition includes commercial, scientific and bycatch;</i></li> <li><i>Local use should be treated differently to commercial use;</i></li> <li><i>Scientific whaling contributes valuable data to the IWC; and</i></li> <li><i>Bycatch is not whaling</i></li> </ul> <i>and to propose how whaling could be weighted in any final contributions scheme', i.e. what % of the total contribution the whaling component should represent – the Task Force has considered 10-25%.</i> </li> <li>At IWC/54, the Commission also requested the Task Force to develop proposals including and excluding whalewatching and small cetaceans.</li> </ul>
<b>Meeting Attendance</b>	<p>This should be based on the following scale: 1-2 delegates (0 shares); 3-5 (1 share); 6-9 (2 shares); 10-15 (3 shares); 16-24 (4 shares); 25+ (5 shares).</p> <p>For the purposes of calculating financial contributions:</p> <ul style="list-style-type: none"> <li>the IWC Chair should not be included in his/her delegation for the purposes of calculating financial contributions</li> <li>the size of the host country's delegation should be assessed using an average of their delegation size over the previous three years.</li> </ul>	<ul style="list-style-type: none"> <li>What % of the total contribution the meeting attendance component should represent. The Task Force has considered a range of 5-20%. It has been noted that meeting attendance is a volatile variable and could create instability in the system if too high a percentage is derived from this component.</li> </ul>

## MODEL 7

**n = variables which can be changed**

			Shares																
Membership	Flat rate fee for each Contracting Government		(n)																
Wealth factor	Countries are allocated to classes based upon GNP and GDP/per capita as follows: Class A GNP Less than US\$ 10 billions and GDP/capita less than US\$10,000 (n) Class B GNP greater than US\$10 billions and GDP/capita less than US\$ 10,000 (n) Class C GNP less than US\$ 1,000 billions and GDP/capita greater than US\$10,000 (n) Class D GNP greater than US\$ 1,000 billions and GDP/capita greater than US\$10,000 (n)																		
Delegation size	1 – 2 delegates 0 3 – 5 delegates 1 6 – 9 delegates 2 10 – 15 delegates 3 16 –24 delegates 4 25 or more delegates 5																		
Consumptive Use (Catches of whales)	All whaling treated equally or different treatment for different types of whaling as in options 1 & 2.  Catches are defined as number of whales taken in the previous year. Catches are converted to minke whale equivalents as follows: <table><tr><td>Species</td><td>‘Minke equivalent’</td></tr><tr><td>Gray</td><td>2</td></tr><tr><td>Sperm</td><td>2</td></tr><tr><td>Bryde’s</td><td>2</td></tr><tr><td>Bowhead</td><td>3</td></tr><tr><td>Humpback</td><td>3</td></tr><tr><td>Fin</td><td>5</td></tr><tr><td>Sei</td><td>*</td></tr></table>	Species	‘Minke equivalent’	Gray	2	Sperm	2	Bryde’s	2	Bowhead	3	Humpback	3	Fin	5	Sei	*	Option 1 Weighting different types of whaling operations differently :- Aboriginal Subsistence:- Each (n) whales (or part of (n))  ‘Other’ i.e. all other types of whaling:- Each (n) whales (or part of (n)) ----- Option 2 All types of whaling operations treated equally:- Each (n) whales (or part of (n))	(n)  
Species	‘Minke equivalent’																		
Gray	2																		
Sperm	2																		
Bryde’s	2																		
Bowhead	3																		
Humpback	3																		
Fin	5																		
Sei	*																		

This model has four major components: membership, delegation size, consumptive use, and a wealth factor that is determined by allocating Contracting Governments to one of four classes depending on their GNP and GDP/capita.

\* Still to be determined, together with additional species as necessary.

**Table 3**

**MODEL 8**

**n = variables which can be changed**

This model allocates the total amount required in contributions in specified proportions to Membership, Whaling and Meeting Attendance and integrates a wealth factor with the membership component. The basic allocations are:

	Percentage of Total contributions required
Membership	(n)
Whaling	(n)
Meeting Attendance	(n)

**Membership**

The annual membership component is modified to reflect capacity to pay. A wealth factor is allocated to each Contracting Government as shown below. A basic share is calculated by dividing the defined total sum for membership (n% of the total required in contributions) by the sum of the wealth factors. The basic share for each member is then adjusted by multiplying it by that country's wealth factor.

Wealth:	Factor
GNP Less than US\$ 10 billions <b>and</b> GDP/capita less than US\$10,000	(n)
GNP greater than US\$10 billions and GDP/capita less than US\$ 10,000	(n)
GNP less than US\$ 1,000 billions <b>and</b> GDP/capita greater than US\$10,000	(n)
GNP greater than US\$ 1,000 billions <b>and</b> GDP/capita greater than US\$10,000	(n)

**Whaling**

Shares are allocated to each Contracting Government conducting whaling operations as follows:

All whaling treated equally <b>or</b> different treatment for different types of whaling as in options 1 & 2.		<b>Option 1</b>	
		Weighting different types of whaling operations differently	(n)
		Aboriginal Subsistence:-	
		Each (n) whales (or part of (n))	
		'Other'	
		i.e. all other types of whaling:-	(n)
		Each (n) whales (or part of (n))	-----
Catches are defined as number of whales taken in the previous year. Catches are converted to minke whale equivalents as follows:		<b>Option 2</b>	
		All types of whaling operations treated equally:-	(n)
		Each (n) whales (or part of (n))	
<u>Species</u>	<u>'Minke equivalent'</u>		
Gray	2		
Sperm	2		
Bryde's	2		
Bowhead	3		
Humpback	3		
Fin	5		
Sei	*		

\* Still to be determined, together with additional species as necessary

The value of a basic share for whaling is calculated by dividing the defined total sum for whaling (n% of the total required) by the sum of the whaling shares. The basic share is then multiplied by the number of shares acquired by each whaling country

**Attendance**

Shares are allocated to each Contracting Government attending the Annual Meeting as shown below. The value of a basic share for attendance is calculated by dividing the defined total sum for attendance (5% of the total required) by the sum of the attendance shares. The basic share is then multiplied by the number of share acquired by each attending country.

Delegation size	Shares
1 – 2 delegates	0
3 – 5 delegates	1
6 – 9 delegates	2
10 – 15 delegates	3
16 – 24 delegates	4
25 or more delegates	5

**Total contribution**

The monetary values resulting from the three calculations are added together to give the total contribution due from each Contracting Government.

## **Part 2**

### **A FRESH LOOK AT THE CONTRIBUTIONS SCHEME**

#### **BACKGROUND**

The Commission identified four guiding ‘principles’ of any contributions scheme (Table 1 below).

Principle	Comments
(1) Openness	This means that it is a relatively simple scheme to understand and use, is publicly available and does not discourage potential new members.
(2) Stability	Stability can have at least two implications: (a) that the scheme itself remains largely unchanged for a long period and can reasonably cope with expected changes in membership and other circumstances (e.g. not over reliant on a few countries); (b) that the individual contributions of member nations remain relatively stable – i.e. do not fluctuate dramatically year on year (e.g. $\pm x\%$ ) The two interpretations will involve a degree of trade-off. For example a stable scheme that can incorporate any changes may inevitably result in dramatic fluctuations in contributions if any elements in a scheme (see (3) and (4) below) – e.g. number of members or number of whaling countries – change dramatically. Thus implication (b) needs to be examined from the perspective of (i) the IWC as a whole and (ii) each individual nation.
(3) Fairness	Fairness, like beauty, is in the eye of the beholder. In terms of an intergovernmental organisation, it probably means a compromise scheme that all can live with (rather than all are happy with) and that enables the organisation to fulfil its mandate. It will result from an acceptable balance being found between the various elements comprising the scheme.
(4) User (beneficiary) pays	In some ways this is both a principle and a guideline for what the elements in the scheme might be. The concept of a ‘user’ can be viewed in a very narrow way (e.g. the direct exploiter only) or in a broad way (anyone who receives some benefit from the success of the organisation). The latter seems the only interpretation that will allow principles (2) and (3) to be met – and the word ‘user’ might be better termed ‘beneficiary’. The question then becomes one of identifying the elements to consider - finding an appropriate balance among them essentially falls under principle (3).

In its discussions thus far, the Task Force identified four ‘elements’ that should be included, although wording (‘shall include’) leaves it open for additional elements. These should be crudely evaluated in the general context of principles (2) - (4) above before any possible balances/options/details are evaluated (Table 2 below).

Element of scheme	Stability	Fairness	Beneficiary pays
Annual membership component	Important in context of (2a) - any long-term scheme must be able to cope with changes in membership. Dramatic changes may compromise (2b).	Fair that all members must pay at least some contribution.	Clearly any member benefits in some sense.
Wealth factor (ability to pay)	Not in itself related to (2a) but if agreed then has potential major impact on (2b) if changes in composition of membership occur e.g. the withdrawal from the Convention of a wealthy country.	Fair that the wealth of a country is taken into account in any contributions scheme.	There may be some trade-off between this and ‘fairness’ e.g. a poor country involved in consumptive use (see below).
Consumptive use	Important in context of (2a) - any long-term scheme must be able to cope with increases/decreases in consumptive use levels. Dramatic changes may have a major impact on (2b).	Fair that countries involved in consumptive use (although that needs defining) contribute based on that element. Is also relevant to ask whether it is fair that other ‘uses’ are not considered. Both consumptive and non-consumptive users should benefit from effective management of whale stocks by the organisation	Clearly, this is directly relevant.
Delegation size	Not directly related to (2a) but if agreed then has potential impact on (2b) if dramatic annual changes in	It is fair in that delegation size has bearing on costs for an annual meeting – this may be large in	Clearly, this is relevant.

	delegation size occur.	terms of cost of meeting venues.	
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As noted above, in practice the choice of elements can be seen as defining aspects of the concept of beneficiary. In this context, delegation size is being seen as a *measure* (of Annual Meeting use), rather than an element *per se*. The rationale behind this is that the Annual Meeting costs are a major share of the budget. The question of the definition of a 'beneficiary' can be seen in different, not necessarily mutually exclusive ways, for example:

(1) beneficiaries of each of the 'twin pillars' of the Convention: the conservation of whale stocks (non-consumptive and consumptive benefits) and the orderly development of the whaling industry (non-consumptive and consumptive benefits);

(2) beneficiaries of the 'mechanics' of the Convention e.g. the Secretariat, Scientific Committee.

## WHAT COMPRISES A CONTRIBUTION SCHEME MODEL?

In its simplest terms, a model is a mechanism for taking input data (for each of the elements) and manipulating these to provide a way of allocating the total budget amongst member governments.

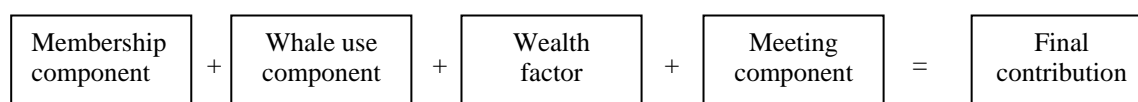


Fig. 1 above represents a single model.

There are two levels of variables/allocations within such a model that can result in innumerable model variants: (1) within an element; (2) between elements.

## VARIABLES WITHIN ELEMENTS

Before discussing these, it is worth making a few general comments about the use of 'bands' for allocation within any of the elements discussed below, since these have been suggested in one form or another for several elements, most notably 'wealth factor' and 'meeting component'. Whilst the use of bands has an attraction of simplicity, it may result in problems of stability and fairness when countries are near the border, and unfairness when the bands are broad. In practice, with modern computers, the need for broad bands for simplicity is largely unnecessary. Where bands are useful is where accurate data are unavailable or difficult to collect. Not using bands will, of course, result in the contribution for each member country being different.

### Membership component

The logical approach is that this component is equal for all countries. The decision that needs to be taken is what proportion of the total budget should that represent. This would need to be based on an examination of the stability and fairness principles in the light of the overall package.

### Wealth factor

The approach being taken thus far is to use some combination of GNP and *per capita* income to assign countries to one of a number of bands. The potential variable therefore surrounds the number and definition of bands. The present CTF suggestion is given in Table 3.

Table 3

GNP	<i>per capita</i> income	Economic grouping
<US\$1x10 <sup>10</sup>	<US\$1x 10 <sup>4</sup>	1
>US\$1x 10 <sup>10</sup>	<US\$1x 10 <sup>4</sup>	2
<US\$1x 10 <sup>12</sup>	>US\$1x 10 <sup>4</sup>	3
>US\$1x 10 <sup>12</sup>	>US\$1x 10 <sup>4</sup>	4

Objections have been made that this is unfair to: (1) countries with small economies and a large *per capita* income and/or (2) countries with large external debts. As an example of an alternative to the 'band' approach used above, Table 3a shows simple indices that relate GNI, *per capita* income and external debt<sup>1</sup> – all based on data from the *World Bank*. This provides a means of dividing up the budget (or portions of the budget) without requiring the use of broad bands. Data for almost all (45 out of 49) member nations are available from the World Bank. The index is based on:

$$\text{Log GNI} \times [\text{log}] \text{GNI } \textit{per capita} \times [\text{x Debt factor}] \quad (1)$$

<sup>1</sup> Consideration should be given to the using the World Bank's, purchasing power corrected figures.

The log of GNI is used to flatten the dramatic difference between the richest (US\$9,601.5bn) and the poorest (US\$0.3bn) countries. The *per capita* value provides additional insight into the wealth of a country's inhabitants. A log function of this can also be used if one wished to minimise the *per capita* index as well. The debt factor takes the World Bank's debt category (one of four) as the basis for an (arbitrary) multiplicative factor as shown in Table 3. Table 3 provides examples of using this approach. Note that these are not being put forward as a final proposal, merely as an illustration of an approach that could be taken. An alternative to the log function on the *per capita* income would be to use 'purchasing power parity' data from the World Bank. At the time of writing, such data are not available for all countries but this may be investigated further in time for the CTF meeting in Cambridge.

Table 3

Examples of alternative approaches to examining the 'wealth' component (using this year's budget) and assuming this comprises 50% of the total budget. W1 uses the 'band' method already considered by the Task Force. The 3 final columns are based on the use of equation (1) above with (W3) and without (W2) the use of a log function on GNI *per capita*. W4 uses a log function on both but does not include a debt factor. Arbitrary values have been chosen for the debt factor (SI=severe indebtedness=1; MI=moderately indebted=2, LI=less indebted=3 and NC=not categorised=6)

	GNP	GNI pc	DC	W1		W2		W3		W4	
	US\$B	US\$		Amount	% of total	Amount	% of total	Amount	% of total	Amount	% of total
Antigua&Ba	0.7	9,440	LI	£5,613	0.90	£2,260	0.36	£4,364	0.70	£9,720	1.56
Argentina	276.2	7,460	SI	£11,225	1.80	£1,371	0.22	£3,265	0.52	£14,544	2.33
Australia	388.3	20,240	NC	£16,838	2.70	£22,768	3.65	£22,217	3.57	£16,494	2.65
Austria	204.5	25,220	NC	£16,838	2.70	£27,329	4.39	£21,877	3.51	£16,241	2.61
Benin	2.3	370	SI	£5,613	0.90	£49	0.01	£1,560	0.25	£6,950	1.12
Brazil	610.1	3,580	SI	£11,225	1.80	£689	0.11	£3,135	0.50	£13,964	2.24
Chile	69.8	4,590	MI	£11,225	1.80	£2,328	0.37	£8,519	1.37	£12,648	2.03
China	1,062.9	840	LI	£11,225	1.80	£333	0.05	£5,319	0.85	£11,846	1.90
CostaRica	14.5	3,810	LI	£11,225	1.80	£1,160	0.19	£5,000	0.80	£11,135	1.79
Denmark	172.2	32,280	NC	£16,838	2.70	£34,622	5.56	£22,180	3.56	£16,467	2.64
Dominica	0.3	3,260	NC	£5,613	0.90	£2,163	0.35	£10,693	1.72	£7,939	1.27
Finland	130.1	25,130	NC	£16,838	2.70	£26,499	4.25	£21,281	3.42	£15,799	2.54
France	1,438.3	24,090	NC	£22,451	3.60	£29,129	4.68	£24,301	3.90	£18,041	2.90
Gabon	3.9	3,190	SI	£5,613	0.90	£441	0.07	£2,220	0.36	£9,887	1.59
Germany	2,063.7	25,120	NC	£22,451	3.60	£30,958	4.97	£24,871	3.99	£18,464	2.96
Grenada	0.4	3,770	LI	£5,613	0.90	£857	0.14	£3,730	0.60	£8,307	1.33
Guinea	3.3	450	SI	£5,613	0.90	£61	0.01	£1,659	0.27	£7,390	1.19
Iceland	8.5	30,390	NC	£16,838	2.70	£26,709	4.29	£18,070	2.90	£13,415	2.15
India	454.8	450	LI	£11,225	1.80	£170	0.03	£4,604	0.74	£10,254	1.65
Ireland	86.0	22,660	NC	£16,838	2.70	£23,291	3.74	£20,532	3.30	£15,243	2.45
Italy	1,163.2	20,160	NC	£22,451	3.60	£24,101	3.87	£23,602	3.79	£17,523	2.81
Japan	4,519.1	35,620	NC	£22,451	3.60	£45,696	7.33	£26,782	4.30	£19,883	3.19
Kenya	10.6	350	MI	£11,225	1.80	£156	0.03	£5,210	0.84	£7,736	1.24
KoreaRep	421.1	8,910	NC	£11,225	1.80	£10,069	1.62	£20,473	3.29	£15,199	2.44
Mexico	497.0	5,070	LI	£11,225	1.80	£1,928	0.31	£6,462	1.04	£14,392	2.31
Monaco*	1.3	27,000	NC	£16,838	2.70	£20,466	3.29	£15,406	2.47	£11,437	1.84
Mongolia	0.9	390	MI	£5,613	0.90	£143	0.02	£4,363	0.70	£6,479	1.04
Morocco	33.9	1,180	LI	£11,225	1.80	£381	0.06	£4,546	0.73	£10,124	1.63
Netherlands	397.5	24,970	NC	£16,838	2.70	£28,126	4.51	£22,718	3.65	£16,866	2.71
NewZealand	49.8	12,990	NC	£16,838	2.70	£12,895	2.07	£18,729	3.01	£13,904	2.23
Norway	155.1	34,530	NC	£16,838	2.70	£36,802	5.91	£22,184	3.56	£16,470	2.64
Oman*	13.6	5,683	NC	£11,225	1.80	£5,167	0.83	£15,656	2.51	£11,623	1.87
Palau†	0.9	390	NC	£5,613	0.90	£286	0.05	£8,727	1.40	£6,479	1.04
Panama	9.3	3,260	MI	£5,613	0.90	£1,442	0.23	£7,127	1.14	£10,583	1.70
Peru	53.4	2,080	SI	£11,225	1.80	£346	0.06	£2,529	0.41	£11,266	1.81
Portugal	111.2	11,120	NC	£16,838	2.70	£11,614	1.86	£19,381	3.11	£14,389	2.31
RussianFed	241.0	1,660	MI	£11,225	1.80	£908	0.15	£8,080	1.30	£11,997	1.93
StKitts&Nev	0.3	6,570	LI	£5,613	0.90	£1,453	0.23	£3,873	0.62	£8,626	1.38
Saint.Lucia	0.7	4,120	LI	£5,613	0.90	£986	0.16	£3,969	0.64	£8,840	1.42
StVincent&G	0.3	2,720	MI	£5,613	0.90	£903	0.14	£5,227	0.84	£7,761	1.25
SanMarino†	1.3	27,000	NC	£16,838	2.70	£20,466	3.29	£15,406	2.47	£11,437	1.84
Senegal	4.7	490	MI	£5,613	0.90	£206	0.03	£5,187	0.83	£7,701	1.24
SolomonIs	0.3	620	LI	£5,613	0.90	£137	0.02	£2,833	0.45	£6,310	1.01
S.Africa	129.2	3,020	LI	£11,225	1.80	£1,061	0.17	£5,608	0.90	£12,490	2.00
Spain	595.3	15,080	NC	£16,838	2.70	£17,378	2.79	£22,085	3.54	£16,396	2.63
Sweden	240.7	27,140	NC	£16,838	2.70	£29,694	4.77	£22,248	3.57	£16,517	2.65
Switzerland	273.8	38,140	NC	£16,838	2.70	£42,045	6.75	£23,164	3.72	£17,197	2.76
UK	1,459.5	24,430	NC	£22,451	3.60	£29,563	4.75	£24,354	3.91	£18,080	2.90
USA	9,601.5	34,100	NC	£22,451	3.60	£45,400	7.29	£27,679	4.44	£20,549	3.30

\* no World Bank data – supplied by country; †no World Bank data – assumed by comparison

## 'Use'

Apart from a broad 'user pays' statement, the objective of this has not been clearly spelt out. For example, is it intended to be a 'tax' on: (1) removing whales (treats all removals equally – from a management perspective, it matters not whether the animal is removed accidentally or deliberately); (2) catching whales deliberately (treats all whaling



equally); (3) the financial benefits received from whales (treats all profit making industries equally); (4) the work undertaken by the Commission (e.g. Scientific Committee). Agreeing such an objective clearly would help in determining appropriate factors and devising measures (see Table 4). Put another way, before entering into the details of designing a fair, 'stable' approach to this element, two fundamental questions need to be answered based on a decision about the objective:

(1) What factors (types of use) should be included?

(2) Should the various categories of whaling be treated differently?

Finally, it must be noted that there is a strong relationship between this item and that of how to deal with costs of the RMS.

Table 4  
A comparison of objectives and appropriate factors (see text).

Objective	Factor:	Commercial whaling*	Aboriginal subsistence whaling*	Scientific permit whaling*	Incidental captures and ship strikes†	Whalewatching†
'Tax' on:						
(1) All whale removals		Yes	Yes	Yes	Yes	No
(2) All whale deliberate removals		Yes	Yes	Yes	No	No
(3) Financial benefits†		Yes	No	No?	No	Yes
(4) 'Work'		Yes	Yes	Yes	Yes	Yes

\* Easy to measure; † Difficult to measure

#### *Availability of information*

Before discussion of potential measures of the various factors, it is worth noting that:

(a) it is easy to measure numbers of whales removed deliberately by countries;

(b) the quality of the data for non-deliberate removals (incidental captures and ship strikes) varies considerably by country – it is not simple to collect accurately;

(c) financial data (for both consumptive and non-consumptive use) are not formally reported to the Commission – it is particularly difficult to develop and agree an appropriate measure of the financial benefits of whalewatching (especially given that operations are often based on large and small cetaceans) – there are no generally accepted independent data available (c.f. *World Bank* data);

(d) it is difficult to assess the various levels of Commission work associated with any particular operation or category of whaling – it is not necessarily related to the size of catches/removals.

Thus for (b-d) above, the 'band' approach would be most suitable if it was decided that such elements should be incorporated. A suggestion as to how this might be done will be presented in Cambridge.

If it is decided to include small cetaceans, although points (a) – (d) above generally apply, it should be noted that: (1) at present not all countries routinely report catch data; (2); incidental catches represent the vast majority of removals and the data are poor or non-existent for many areas.

#### *Removals*

Two variant measures for removals have been suggested:

(1) actual numbers of whales;

(2) conversion of whales to crude 'minke whale units' based on mean weight of catch.

There are implications as to which of these options is chosen in the context of the potential objectives listed above.

If *actual numbers of whales* are used, these can be considered as a 'proxy' for level of whaling activity, rather than a 'tax' on whale products. In essence this is similar in philosophy to the method currently used although more finely tuned. If the numbers are intended as an approximation to 'effort', there is no need to convert to minke whale units.

Use of a *minke whale unit* would be more appropriate if one wished to 'tax' whale products, since a single large whale would count for more than a small whale. It should be noted that given the present (and indeed likely future) whaling operations, this will have the effect of increasing the 'share' of the aboriginal subsistence whaling nations, since they take more larger whales than the others (Table 5). This will be true even if the various categories of whaling are weighted differently.

Table 5  
Actual and minke whale unit (MWU) catches for 2001 (2001/02). The conversion to MWU is that agreed by the Scientific Committee.

Nation	Total	MWU	Increase (MWU – total)	%increase
Denmark (aboriginal)	166	202	36	122
St. Vincent (aboriginal)	2	6	4	300
Russia(aboriginal)	113	339	226	300
USA(aboriginal)	75	225	150	300
Norway (commercial)	552	552	0	100
Japan(special permit)	599	658	59	110
Korea (infraction)	1	1	0	100

In terms of ‘stability’, the Commission is moving towards 5-year block quotas under both the RMP and AWMP, within which there will be various degrees of allowance between years. Scientific permit catches are often presented as long-term programmes. Whaling under objection at present uses the RMP approach. Rather than using retrospective actual catches that may fluctuate (possibly considerably) between years, it might therefore be sensible to use the average annual catch available within the block quota for the full 5-year period<sup>2</sup>. This is particularly true if numbers are seen as an approximation of effort as it resolves any problems associated with not fulfilling the catch limit. This approach also removes the need to consider infractions as part of the normal budget – this is better dealt with under RMS discussions. Table 6 illustrates this approach. It also shows use of an arbitrary ‘weighting factor’ for whaling type if desired.

Table 6

Catches are based on the ‘available catch limit’ rather than the actual catch (based on a 5-year block where appropriate) as discussed in the text above. The arbitrary weighting factor used in the final section is: aboriginal subsistence=1, special permit=2 and commercial=3

Country	category	All types of whaling treated the same			Weighting factor applied		
		Weighting factor	Index - catch	Index - MWU	Weighting factor	Index - catch	Index - MWU
Japan	SP	1	700	810	2	1400	1620
Norway	C	1	711	711	3	2133	2133
USA	AS	1	67	201	1	67	201
Denmark	AS	1	206	282	1	206	282
Russian Fed.	AS	1	127	381	1	127	381
St Vincent & The G.	AS	1	4	12	1	4	12

### Meeting attendance

The discussion relating to ‘bands’ applies here. There is no reason why actual numbers cannot be used i.e. divide the total allocated to meetings by the total number of delegates to obtain a value per delegate. With respect to discussions over whether it is proper to include the Commissioner and Alternate Commissioner in the allocation, the use of actual numbers reduces the impact of their inclusion. One should also remember that the aim of this is to fairly share out the meeting component among members rather than effect an actual charge. Alternatively, one could use the actual number but allowing the first 2 or 3 delegates to attend at no cost as previously discussed by the CTF – this does not distinguish between those who attend and those who do not. An approach using actual numbers rather than bands may also reduce the temptation for ‘convenient’ nominations of support staff! An illustration of these options is given as Table 7 on the next page.

### VARIABLES BETWEEN ELEMENTS

In its simplest form, variants can be based on allocating different percentages of the total budget to each of the elements considered. Examples of 10 such variants are shown in the table (below. The monetary values are based on the this year’s budget). The final column under membership is the total per country assuming the present membership of 49 countries.

Variant	Membership†			Use*		Wealth†		Meeting†	
	%	n=49		%		%		%	
1	5	£62,301	£1,271	25	£311,503	60	£747,606	10	£124,601
2	10	£124,601	£2,543	25	£311,503	50	£623,005	15	£186,902
3	10	£124,601	£2,543	20	£249,202	60	£747,606	10	£124,601
4	15	£186,902	£3,814	20	£249,202	60	£747,606	5	£62,301
5	15	£186,902	£3,814	25	£311,503	40	£498,404	20	£249,202
6	15	£186,902	£3,814	20	£249,202	50	£623,005	15	£186,902
7	20	£249,202	£5,086	20	£249,202	50	£623,005	10	£124,601
8	20	£249,202	£5,086	20	£249,202	40	£498,404	20	£249,202
9	20	£249,202	£5,086	30	£373,803	40	£498,404	10	£124,601
10	40	£498,404	£10,172	10	£124,601	40	£498,404	10	£124,601

<sup>2</sup> Consideration needs to be given to cases where more than one nation is participating in a particular hunt. As discussed in an RMS context, ideally, under such circumstances, relevant governments should reach an agreement in advance with respect to allocation of the catch limit (as is the case with aboriginal subsistence whaling).

† to be shared amongst 49 countries; \* to be shared amongst 6 countries if only consumptive use is chosen

Table 7

One example showing the different ways of allocating the meeting component (assuming that this represents 10% of last year's budget). D1 uses the banding system previously discussed by the task force (effectively 2 'free' delegates, D2 uses the actual number of delegates, while D3 uses the number of delegates minus three).

	Delegates	D1		D2		D3	
		Amount	% of total	Amount	% of total	Amount	% of total
Antigua&Ba	3	£3,039	2.44	£1,841	1.48	£0	0.00
Argentina	2	£0	0.00	£1,228	0.99	£0	0.00
Australia	7	£6,078	4.88	£4,297	3.45	£5,477	4.40
Austria	3	£3,039	2.44	£1,841	1.48	£0	0.00
Benin	2	£0	0.00	£1,228	0.99	£0	0.00
Brazil	5	£3,039	2.44	£3,069	2.46	£2,738	2.20
Chile	1	£0	0.00	£614	0.49	£0	0.00
China	3	£3,039	2.44	£1,841	1.48	£0	0.00
CostaRica	0	£0	0.00	£0	0.00	£0	0.00
Denmark	9	£6,078	4.88	£5,524	4.43	£8,215	6.59
Dominica	2	£0	0.00	£1,228	0.99	£0	0.00
Finland	2	£0	0.00	£1,228	0.99	£0	0.00
France	2	£0	0.00	£1,228	0.99	£0	0.00
Gabon	4	£3,039	2.44	£2,455	1.97	£1,369	1.10
Germany	5	£3,039	2.44	£3,069	2.46	£2,738	2.20
Grenada	2	£0	0.00	£1,228	0.99	£0	0.00
Guinea	3	£3,039	2.44	£1,841	1.48	£0	0.00
Iceland	6	£6,078	4.88	£3,683	2.96	£4,108	3.30
India	1	£0	0.00	£614	0.49	£0	0.00
Ireland	2	£0	0.00	£1,228	0.99	£0	0.00
Italy	5	£3,039	2.44	£3,069	2.46	£2,738	2.20
Japan	35	£15,195	12.20	£21,483	17.24	£43,816	35.17
Kenya	1	£0	0.00	£614	0.49	£0	0.00
KoreaRep	7	£6,078	4.88	£4,297	3.45	£5,477	4.40
Mexico	3	£3,039	2.44	£1,841	1.48	£0	0.00
Monaco	2	£0	0.00	£1,228	0.99	£0	0.00
Mongolia	3	£3,039	2.44	£1,841	1.48	£0	0.00
Morocco	1	£0	0.00	£614	0.49	£0	0.00
Netherland	3	£3,039	2.44	£1,841	1.48	£0	0.00
NewZealand	11	£9,117	7.32	£6,752	5.42	£10,954	8.79
Norway	10	£9,117	7.32	£6,138	4.93	£9,585	7.69
Oman	1	£0	0.00	£614	0.49	£0	0.00
Palau	3	£3,039	2.44	£1,841	1.48	£0	0.00
Panama	2	£0	0.00	£1,228	0.99	£0	0.00
Peru	1	£0	0.00	£614	0.49	£0	0.00
Portugal	1	£0	0.00	£614	0.49	£0	0.00
RussianFed	3	£3,039	2.44	£1,841	1.48	£0	0.00
StKitts&Nev	2	£0	0.00	£1,228	0.99	£0	0.00
Saint.Lucia	2	£0	0.00	£1,228	0.99	£0	0.00
StVincent&G	3	£3,039	2.44	£1,841	1.48	£0	0.00
SanMarino	1	£0	0.00	£614	0.49	£0	0.00
Senegal	1	£0	0.00	£614	0.49	£0	0.00
SolomonIs	2	£0	0.00	£1,228	0.99	£0	0.00
S.Africa	2	£0	0.00	£1,228	0.99	£0	0.00
Spain	3	£3,039	2.44	£1,841	1.48	£0	0.00
Sweden	3	£3,039	2.44	£1,841	1.48	£0	0.00
Switzerland	2	£0	0.00	£1,228	0.99	£0	0.00
UK	13	£9,117	7.32	£7,979	6.40	£13,692	10.99
USA	13	£9,117	7.32	£7,979	6.40	£13,692	10.99

## HOW DO WE (1) CHARACTERISE MODEL VARIANTS AND (2) CHOOSE AMONG MODEL VARIANTS?

The Task Force has been asked to develop 'performance criteria' or measures. These need to reflect the principles agreed by the Commission and enable an objective view of proposed schemes. Inevitably, any final choices will depend on trade-offs between the various principles.

There are two elements to any evaluation process:

- (1) descriptive statistics characterising each model/model variants;
- (2) descriptive statistics describing differences between models/model variants.

**Stability (a) – i.e. that the scheme itself remains largely unchanged for a long period and can reasonably cope with expected changes in membership and other circumstances**

Rather than a statistic, this is rather a design feature. In effect, it relates to answers to a number of questions:

e.g. Does the scheme allow for easy incorporation of (a) new members; (b) loss of members; (c) increases in whaling countries; (d) decreases in whaling countries.

**Stability (b) – i.e. that the individual contributions of member nations remain relatively stable – i.e. do not fluctuate dramatically year on year**

In many ways, this is will be a key performance feature for evaluation – but it can be viewed from two positions: that of individual countries; that of the organisation as a whole. A way to examine particular schemes would be to develop a number of test scenarios (where various elements change, including over time), allocate one (e.g. the present situation) as the ‘base case’ – and then examine the performance measures for variations from the base case for each model variant. As governments are presumably more worried about their contributions going up rather than down, these scenarios should be ‘pessimistic’ rather than ‘optimistic’. Possible examples might be:

- (1) Base case = current situation
- (2) Scenario 2 = loss of top 2 non-whaling ‘wealth’ component countries
- (3) Scenario 3 = loss of top whaling country

### **Fairness**

Clearly, different countries will have a different perspective of fair. Despite this, agreements could probably be reached on the statistics needed to try to reach such a decision.

### **Statistics characterising each model/model variants by scenario**

There are a number of statistics that may prove useful in characterising the performance of variants which can then be used to assess them in terms of the principles elucidated earlier.

- (1) average, median (i.e. middle), maximum and minimum contribution;
- (2) standard deviation from the ‘average’ contribution;
- (3) 5<sup>th</sup> and 95<sup>th</sup> percentiles of contributions;
- (4) ratio of maximum to minimum contribution;
- (5) percentage of budget contribution allocated to the top 5, 10, 15, 20 countries (or top 20%, 30% 50%).

A *single* example of the summary statistics for one of the *many possible* variants is given as Table 8. An example of the full results by country is given as Table 9. It is not intended to suggest that this is the ‘best’ variant. It is merely included for illustrative purposes.

Table 8

Summary statistics for a single model variant. Numbers in the final column are the values for the ‘interim’ budget adopted at Shimonoseki.

Model variant conditions:		Statistics:	Average	£25,429	‘Interim’
Membership:	20%	Median	£9,187		18,375
	n=49	Maximum	£174,470		104,563
	Each contribution, £5,086	Minimum	£5,856		10,500
Consumptive use:	20%	SD	33,718		19,921
	Direct catches only	5th percentile	£5,961		10,500
	No weighting by category	95th percentile	£62,584		62,769
	No minke whale conversion	Ratio (maximum to minimum)	30		10
Wealth:	50%	% top 5	41		17
	Log GNI not log GNI <i>per</i>	% top 10	56		24

Meetings:	<i>capita, debt factor</i>			
	10%	% top 15	70	31
	Actual number of delegates	% top 20	80	43

Table 9

Actual contributions for the model variant described in Table 8

	Membership	Consum. use	Wealth	Meeting	Total	% of total	% of total 'interim'
Antigua&Ba	£5,086	£0	£2,260	£1,841	£9,187	0.74	0.84
Argentina	£5,086	£0	£1,371	£1,228	£7,685	0.62	1.26
Australia	£5,086	£0	£22,768	£4,297	£32,150	2.58	2.65
Austria	£5,086	£0	£27,329	£1,841	£34,256	2.75	2.09
Benin	£5,086	£0	£49	£1,228	£6,362	0.51	0.84
Brazil	£5,086	£0	£689	£3,069	£8,843	0.71	1.69
Chile	£5,086	£0	£2,328	£614	£8,028	0.64	1.26
China	£5,086	£0	£333	£1,841	£7,260	0.58	1.26
CostaRica	£5,086	£0	£1,160	£0	£6,246	0.50	0.84
Denmark	£5,086	£15,815	£34,622	£5,524	£61,047	4.90	4.65
Dominica	£5,086	£0	£2,163	£1,228	£8,477	0.68	0.84
Finland	£5,086	£0	£26,499	£1,228	£32,813	2.63	2.09
France	£5,086	£0	£29,129	£1,228	£35,442	2.84	3.58
Gabon	£5,086	£0	£441	£2,455	£7,982	0.64	1.12
Germany	£5,086	£0	£30,958	£3,069	£39,113	3.14	4.14
Grenada	£5,086	£0	£857	£1,228	£7,171	0.58	0.84
Guinea	£5,086	£0	£61	£1,841	£6,988	0.56	0.84
Iceland	£5,086	£0	£26,709	£3,683	£35,477	2.85	2.65
India	£5,086	£0	£170	£614	£5,870	0.47	1.26
Ireland	£5,086	£0	£23,291	£1,228	£29,604	2.38	2.09
Italy	£5,086	£0	£24,101	£3,069	£32,256	2.59	4.14
Japan	£5,086	£92,126	£45,696	£21,483	£164,391	13.19	8.39
Kenya	£5,086	£0	£156	£614	£5,856	0.47	1.26
KoreaRep	£5,086	£0	£10,069	£4,297	£19,452	1.56	1.69
Mexico	£5,086	£0	£1,928	£1,841	£8,855	0.71	1.26
Monaco	£5,086	£0	£20,466	£1,228	£26,779	2.15	2.09
Mongolia	£5,086	£0	£143	£1,841	£7,070	0.57	0.84
Morocco	£5,086	£0	£381	£614	£6,080	0.49	1.26
Netherland	£5,086	£0	£28,126	£1,841	£35,053	2.81	2.09
NewZealand	£5,086	£0	£12,895	£6,752	£24,732	1.98	3.22
Norway	£5,086	£126,444	£36,802	£6,138	£174,470	14.00	5.22
Oman	£5,086	£0	£5,167	£614	£10,866	0.87	1.26
Palau	£5,086	£0	£286	£1,841	£7,214	0.58	0.84
Panama	£5,086	£0	£1,442	£1,228	£7,755	0.62	0.84
Peru	£5,086	£0	£346	£614	£6,045	0.49	1.26
Portugal	£5,086	£0	£11,614	£614	£17,313	1.39	2.09
RussianFed	£5,086	£9,520	£908	£1,841	£17,355	1.39	2.42
StKitts&Nev	£5,086	£0	£1,453	£1,228	£7,767	0.62	0.84
Saint.Lucia	£5,086	£0	£986	£1,228	£7,300	0.59	0.84
StVincent&G	£5,086	£154	£903	£1,841	£7,983	0.64	1.72
SanMarino	£5,086	£0	£20,466	£614	£26,166	2.10	2.09
Senegal	£5,086	£0	£206	£614	£5,906	0.47	0.84
SolomonIs	£5,086	£0	£137	£1,228	£6,450	0.52	0.84
S.Africa	£5,086	£0	£1,061	£1,228	£7,374	0.59	1.26
Spain	£5,086	£0	£17,378	£1,841	£24,305	1.95	2.09
Sweden	£5,086	£0	£29,694	£1,841	£36,621	2.94	2.09
Switzerland	£5,086	£0	£42,045	£1,228	£48,359	3.88	2.09
UK	£5,086	£0	£29,563	£7,979	£42,628	3.42	4.71
USA	£5,086	£5,144	£45,400	£7,979	£63,609	5.11	6.14

### Statistics describing differences between models/model variants

In addition to changes in the above statistics by scenario, deviations in those statistics from the base case could also be considered. This will contribute mainly to the 'stability' component but may have implications for 'fairness'.

### Final choice

This must be based on an inspection of the above results for a number of model variants. It will involve a degree of compromise amongst members on what comprises 'fair' and 'stable'. Results for a broad range of variants, including scenarios for testing stability in the future will be available for the Task Force Meeting in Cambridge.

