

### Wez' quick note on selection of different baselines and the normalisation process

Table 1 presents some made up data for 5 countries between 2005 and 2010, as well as showing the average catch per country and the average of the best three years as hypothetical baselines for catch history.

|    | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Average | Abv Best 3 |
|----|------|------|------|------|------|------|---------|------------|
| C1 | 190  | 190  | 190  | 190  | 190  | 190  | 190     | 190        |
| C2 | 190  | 210  | 210  | 180  | 150  | 200  | 190     | 206.6667   |
| C3 | 0    | 0    | 0    | 400  | 400  | 340  | 190     | 380        |
| C4 | 250  | 230  | 180  | 120  | 120  | 240  | 190     | 240        |
| C5 | 180  | 170  | 190  | 200  | 210  | 190  | 190     | 200        |
|    |      |      |      |      |      |      | 950     | 1216.667   |

For illustrative purposes, each country has an average catch of 190, but as you can see, each has a very different patter. For example, C1 is very stable at 190 every year, C3 is a new entrant with high recent catch and C4 is very variable year on year. The two scenarios (average vs best) are shown in Figure 1:

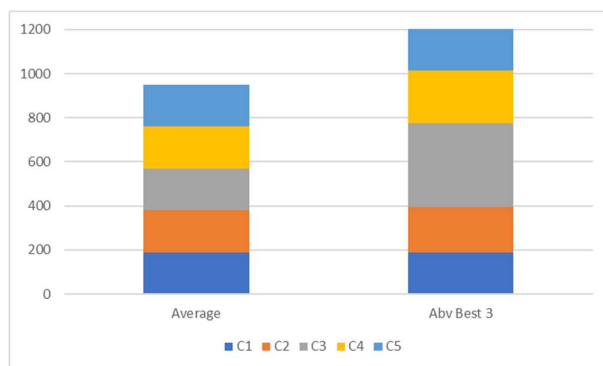
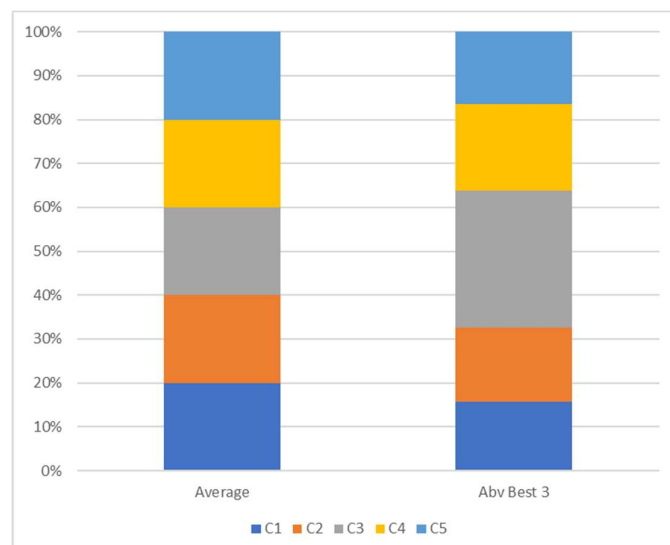


Figure 1 demonstrates that simply using all countries' best catches is unlikely to be sustainable as it adds up to significantly more than the average catch of the fishery. If the stock is very under-utilised this may be acceptable, but that is likely to be a rare situation. Even the average catch may be too high, and under both baselines it is best to convert the raw catches into percentages as shown in Table 2 and Figure 2:

|    | Average | Abv Best 3 |
|----|---------|------------|
| C1 | 20%     | 16%        |
| C2 | 20%     | 17%        |
| C3 | 20%     | 31%        |
| C4 | 20%     | 20%        |
| C5 | 20%     | 16%        |



Normalising each potential baseline to a percentage allows for a true comparison between them. Figure two demonstrates very clearly that each baseline benefits (and costs) different countries in different ways.

C1 (the most stable) is strongly benefits by the average baseline as they receive a proportion equal to everyone else. C3 (the most variable) is strongly favoured by the average of best 3 baseline, receiving a substantially greater percentage than all others. In this scenario, other countries are actually compensating for C3's variability.

When the proportions are applied to a TAC (to be determined by the SC/Commission), the true implications of each potential baseline can be seen. Table three assumes a TAC of 1,000, which is slightly higher than the average catches.

|    | Average | Abv<br>Best 3 |
|----|---------|---------------|
| C1 | 200     | 156           |
| C2 | 200     | 170           |
| C3 | 200     | 312           |
| C4 | 200     | 197           |
| C5 | 200     | 164           |

This table demonstrates that all countries receive an allocation under the average baseline that is higher than their average, because the TAC is high. But it also demonstrates that some countries are likely to face difficulties. In particular, C3 (the recent entrant with high recent catches but nothing early on) doesn't have an allocation that reflects its actual recent catch. In fact, its allocation is nearly half its actual catch. Similarly, C4, which has been active throughout the period but has a deal of variability is disadvantaged in that it will have unused allocation in its low years but will be constrained in the good years.

Under the best baseline, C3 benefits strongly by having its new entrant status best reflected. C4, the variable country fares better than others, but still has an allocation that does not reflect its "peaks". All others end up with substantially lower than their average – because the TAC is taken up so heavily by C3.

#### *Messages*

- It is impossible to identify a single baseline that will suit every CPFC. Flexibility will be required – perhaps even to the extent of multiple baselines that each CPC can choose from.
- IOTC can be as flexible as it likes on baselines without compromising sustainability as long as the normalisation (Figure 2 and Table 2) occurs and the TAC (Table 3) is set correctly.
- The potential for one CPC to impact dramatically on the allocation to another CPC strongly supports the G16 proposal in that factors other than catch history need to play a heavy role.