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Comments by Mike Polioudakis on

Seafood Watch Seafood Report, Farm-Raised Shrimp (Country by country analysis)  
By Santi Roberts and Corey R. Peet

The report is fairly well aware of the elements that go into an evaluation, the problems in evaluating particular elements, the difficulty of weighting them on a similar scale, and the problems in combining them. The report does a fairly good job. It does not require any large revisions.

Instead, it is best to tackle now the question of fairness, which has two sub-issues: (1) aggregation and (2) proportionality. (1) Within countries, there is a mixture of farms that use reasonably responsible practices with farms that do not. (2) It is tempting to tie the national rating to the ratio of farms that use a particular grade of techniques, or tie the national rating to the ratio of product produced under various grade of techniques - but we should not do that. Instead we should be overly sensitive to bad practices and bad product. Suppose, in one case, 50% of shrimp were produced under good conditions, 25% tolerable, and 25% bad while in another case the figures were 30%, 30%, and 40% respectively. The cases might receive a score based on an average. However, this is not what the report aims at nor should aim at. Except in a few cases such as Ecuador or Belize, the product cannot be reliably traced to each particular farm. In most countries, the product emerges as if it came from the entire country indiscriminately. The report has to grade the country as if the country were one firm rather than a mixture of firms. Moreover, even if only a significant fraction of farms use bad techniques, that significant fraction has to play a large role in evaluating the entire country and all the producers in it – including the good producers. The grade should not be in direct proportion to the ratio of product produced by good or bad techniques but should be overly sensitive to the ratio of “bad” product. The grade should fall rapidly in response to increasing amounts of bad product.

In this light, the grades given by the report seem reasonable.

Grading whole countries over these issues is like grading a whole crop based on the percentage of the crop that has “gone bad”, or like grading whole medical schools. The acceptability of an apple crop is not in direct proportion to the number of bad apples. Above a certain small percentage of bad apples, the evaluation of the entire crop falls rapidly. 2% bad apples might be tolerable but we rightly reject the entire crop if 20% is bad. We reject all the doctors from a medical school that graduates 25% of incompetent students no matter how unfair that rejection is to the 75% competent. If a shrimp farm received a lot of feed that was 10% bad, the farm would reject the entire lot.

I know Thailand best. There, the problem of fairness is compounded because large farms use the most environmentally sound methods while small family farms use the worst methods. It might seem unfair to reject the competent large farms because the small farms use bad techniques but it is necessary.

Because of the Western bias in favor of small family firms, we might wish that small farms were ecologically sound “heroes”. We might be tempted to be overly fair as a way

to encourage the small farms to use better techniques, but this tactic seems not to have worked.

On the other hand, if we like large firms for any reason including their sound techniques, then they seem to be the victims of the small farms; and we might seek to soften the evaluation so as to reward them. However, this attempt at fairness would only produce a horrendously difficult evaluation system that would hurt all farms and all countries over the long run.

Grading entire countries (sub-issue 1) in this manner (sub-issue 2) might be unfair in some regards but it might have good results too. In Thailand, small farms with bad techniques linger on because the large farms resist the imposition of codes of conduct, primarily through the influence that large farms have on state agencies. If large farms had to see the cost of not adopting general standards, they might pressure state agencies and small farms to adopt codes of conduct. The codes of conduct might cause some small farms to fail, but the codes would not hurt the large producers, and they would benefit the entire industry, including remaining small farms, over the long run.

Between countries, it might be that a country with 20% “bad” production receives an evaluation that is out-of-proportion-worse than a country with 10% bad production. It is hard to judge if the report came to results of this kind just from the figures in the report. The report should be alert to this possibility and address it. Even if it has happened, it is still largely justifiable for the reasons explained above.

If ever most of world production can be traced back to particular farms, then the question of aggregation has to be revisited. Even then, particular farms, or particular lots of product, would still have to be evaluated with greater weight given to bad factors.

Some specific issues deserve mention.

The report seems to be based on conditions that prevailed in the period around 2000-2003. It should try to be more current.

Production in Southeast Asia, and even in parts of India, largely switched from tiger shrimp (*P. monodon* spp.) to white shrimp (*P. vannamei* spp.), with a resulting change toward slightly less intensive production (although still within the intensive range), more closed systems, better use of feed, and cleaner effluents. The report mentions the change but does not take adequate account of it.

Partly as a result of the switch, disease seems to be less of a problem.

Even before the switch, many farms had gone to an essentially closed system, largely as a result of disease. Few farms with more than two ponds pumped water in and out on a regular basis although they might pump water in when needed irregularly. Few farms released water because the water already in their ponds was often healthier than the water available “in the wild”, and healthy water has become a valuable commodity. Some farms with disease problems released unhealthy water but their neighbors did not like this practice and pressured the farms to stop it. The report mentions the start of this switch toward more closed system but does not fully take it into account.

Many farms had inlet ponds. The report mentions this, but does not seem to have taken full account. Of course, good data might be hard to find.

It is not clear, but I think the use of fish oil in feed has declined among farms of all sizes. Large and medium sized farms use feed that is better formulated while small farms use cheap feed that does not have much fish oil. We need a comprehensive sampling and testing of feeds that are actually used. The report cannot base its evaluation of the use of fish oil on non-existent data but it might wish to be clearer about the problem. The report seems acutely sensitive to the use of fish oil, but, again, this stance is probably merited. The use of fish oil in fish feeds is a good indicator of attitudes toward the environment and of how much adverse impact local fish farms have on the local marine environment, so heightened sensitivity to the use of fish oil is not out of line.

Despite a lot of revisionism on this subject, the report still over-estimates the impact of fish farms on mangroves and on coastal ecology in general, and under-estimates the impact of local populations. Population increase has been the greatest destroyer of the coastal environment. I cannot evaluate the extent to which the report might not be fully accurate without going into detail in particular cases and without discussing the evidence for particular cases, which I cannot do here. The report is probably not so far out of line that ratings should be revised, but greater mention should be given to non-aquaculture causes of environmental degradation.

The report makes scant mention of social impacts. Good data is still hard to find. It is not clear if Seafood Watch considers social impacts part of ecological impacts. Seafood Watch might need to consider its position on this issue, but this report does not need to be revised while it considers.