Sir Bob Geldof
c/o Mark Cowne
Kruger Cowne Limited
Unit 18G Chelsea Wharf
15 Lots Road
London
SW10 0QJ

Email: mark@krugercowne.com

16 June 2014

Dear Sir Bob Geldof,

Re. AquaVision 2014 - Salmon Farming Does NOT Feed the World

Further to previous correspondence, please find attached various scientific papers to read on the plane to the AquaVision conference in Norway tomorrow.

Speaking at the AquaVision conference and lending your good name to such a malignant and morally bankrupt industry is a serious mistake. At best, you are guilty of gullibility. At worst, your greed for appearance money has clouded your judgment. Hopefully, you can use tomorrow's platform to tell salmon farming executives that their business is not only polluting the planet but also spreading social misery and food poverty all over the world.

Far from being a panacea for the global food crisis, salmon farming actually exacerbates the problem. Peer-reviewed scientific studies have clearly shown that salmon farming does not feed the world. The farming of carnivores such as salmon, prawns, tuna and cod effectively drains our global oceans and steals precious protein out of the mouths of hungry people in Africa, Asia and Latin America. Supporting such an ethically, environmentally and socially bankrupt industry is morally repugnant and leaves a bad taste in the mouth much like the farmed salmon served at the AquaVision conference.

The Ecologist featured the controversy back in 2008 via a short film -"The Greed of Feed: what's feeding our cheap farmed salmon?" which is well worth watching. "The salmon we produce is eaten by the mouths of people in the USA and Europe, but the asshole is here in Latin America," said Juan Carlos Cardenas of Ecoceanos. "The true cost of the cheap salmon you eat is being paid with the blood of our people and the health of our oceans."

"Carnivore farming, which requires three to four pounds of smaller fish to produce one pound of a larger one, thus robs Peter to pay Paul," wrote Dr. Daniel Pauly of the University of British Columbia in an article - "Aquacalypse Now" - published in 2009. "The more farmed fish we produce, the less fish there is," he said in another article.

"The fishmeal industry competes with humans for these fish," said Dr. Pauly in the 2009 film 'Farmed Salmon Exposed'. "Grinding these fish for fishmeal amounts to stealing good food out of their mouths and feeding them to salmon which are then a luxury item that only the people in rich countries can afford."

For more background on how fish farming drains the oceans please watch "Grinding Nemo - a film about fish meal"

As Dr. Albert Tacon and Dr. Marc Metian wrote in their 2009 paper: "Fishing for Aquaculture: Non-Food Use of Small Pelagic Forage Fish - A Global Perspective":

> While there is no doubt of the economic viability of aquaculture production systems based on the use of fishery resources as feed inputs, there is growing concern about the long-term sustainability of aquaculture production systems dependent upon the use of wild fishery resources as feed inputs (Deutsch et al., 2007; FAO, 2008c; Naylor et al., 1998, 2000; Tacon et al., 2006). The segments of the aquaculture sector currently most dependent upon fishery resources as feed inputs are primarily those engaged in the production of higher-value (in marketing terms) crustacean and carnivorous finfish species, either through the use of industrially compounded aquafeeds containing high levels of fish meal and fish oil (including salmonids, marine shrimp, marine finfish, eels; Tacon and Metian, 2008), or through the direct use of "low-value/trash fish" either fed alone or within farm-made aquafeeds (including marine fish and some freshwater fish, primarily within the Asian region; FAO, 2008c; Funge-Smith et al., 2005; Hung and Huy, 2007; Merican, 2005; Sim, 2008).

Tacon & Metian wrote in their 2010 paper: "Responsible Aquaculture and Trophic Level Implications to Global Fish Supply":

> Despite having a more ecologically balanced trophic pyramid structure (Figure 1), aquaculture is currently set out towards the increasing culture of high trophic level and higher market value finfish species, particularly within developed countries, and to a lesser extent developing countries and China (Stergiou et al., 2008; Tacon and Nates, 2007; Figure 4). Although total aquaculture production from developed countries represented less than 6.3% of total production by weight in 2006, it represented 15.8% of total production by value (FAO, 2008b). Within developed countries, 90.2% of total finfish production is high trophic level species (top 10 high TL cultured species including Atlantic salmon TL 4.43, rainbow trout TL 4.42, channel catfish TL 3.87, Japanese amberjack TL 3.96, gilthead seabream TL 3.26, silver seabream TL 3.32, European seabass TL 3.79, chinook salmon 4.40, Japanese eel 3.55, and brown trout TL 3.15). On the other hand, only 29.8% for developing countries, and 27.6% for China of total finfish production is high trophic level species (Figure 4). In fact, it is widely believed that over-fishing

and the increasing culture of high trophic level species has been fueled to a large extent by the market demands within developed countries for the consumption and importation of higher market value high trophic level piscivorous/carnivorous finfish and crustacean species (Alder and Sumaila, 2005; Rosenthal, 2008). For example, according to FAO global fisheries database (FAO, 2008b), developed countries imported 80% of all internationally traded fisheries products in 2006 (valued at US$72.6 billion). Of particular significance, is the fact that the culture of high trophic level species and crustaceans is currently highly dependent upon marine capture fisheries for sourcing farm feed inputs, either in the form of fish meal and fish oil used within industrially compounded aquafeeds (Tacon and Metian, 2008), or low value/trash feed in fresh or processed form as a direct feed (Tacon and Metian, 2009a). Moreover, the bulk of these feed inputs is derived from lower value and TL small pelagic forage fish species, including Peruvian anchovy (TL 2.7), blue whiting (TL 4.01), chub mackerel (TL 3.09), Chilean jack mackerel (TL 3.49), Japanese anchovy (TL 2.56), capelin (TL 3.10), Californian pilchard (2.43), European sprat (TL 3.0), round sardinella (TL 3.0), Gulf menhaden (TL 2.19), and Sandeels (3.19).

Tacon & Metian concluded in their 2012 presentation: "Role of fish and aquaculture products in human nutrition and global food security":

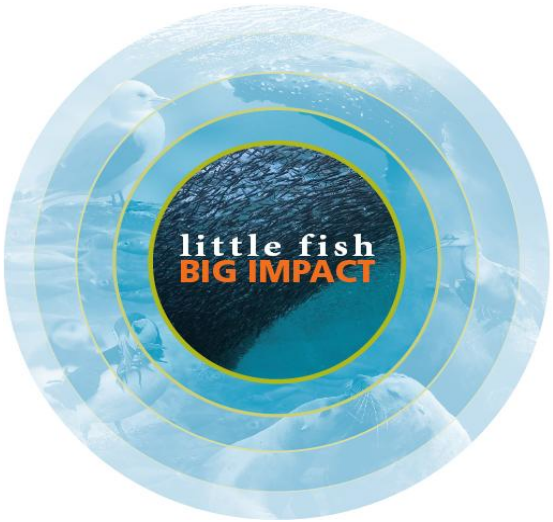
Finally, important to mention that SMALL PELAGIC FISH SPECIES represent one of the best aquatic animal foods from a human nutritional perspective, and as such the continued targeted use of these lower-value fish (from a cost perspective) for reduction into fishmeal & fish oil for animal feeding should be discouraged, and their direct use as HUMAN FOOD should be encouraged and promoted for the benefit of the rural poor and needy

In other words, we should cut out the greedy middle-man in the shape of salmon farming and utilize small fish for direct human consumption.

"We need fish meals not fishmeal," said Dr. Patricia Majluf at the Seafood Summit in 2011. "Put simply – fish feed multinationals are stealing perfectly healthy food out of the mouths of Peruvians." (read Dr. Patricia Majluf's presentation in full online here).

As Dr. Jennifer Jacquet from the University of British Columbia said in her presentation to the Seafood Summit: "If you're farming a predator you'll always get less out than you put in" (read more details via 'Fighting for Fish Meals Not Fishmeal').

A report – 'Little Fish, Big Impact' – published in April 2012 recommended that catches of forage fish be cut in half due to concerns of overfishing and use in aquaculture. "Demand for forage fish in agriculture, aquaculture, and other industries will continue to increase pressure on wild forage fish stocks," said the report.



“Forage fish have been particularly important to the development of the aquaculture sector, which now supplies almost half of the total fish and shellfish for human consumption,” continued the report. “In 2006, 88.5 percent of fish oil and 68.2 percent of fish meal produced globally were used by the aquaculture sector. Rapid growth in aquaculture production has resulted in greater demand, higher prices, and increased consumption of fish meal and fish oil by the aquaculture industry. Demand for carnivorous farmed fish in industrialized and emerging nations will continue to be an important driver in the world market and will therefore continue to increase pressure on wild forage fish stocks.”

For more background on this controversial issue please read a letter sent to Kofi Annan in 2012 (when he was a keynote speaker at AquaVision 2012) - online here (and attached with this letter).

There are further details via a new blog - "Geldof Caught in 'Greed of Feed'" - and my previous blog: "Geldof Drinks the Kool-Aid, Not Feeds the World"

Yours sincerely,

Don Staniford

Director, Global Alliance Against Industrial Aquaculture