**Project: Protection of marine ecosystems and seafood supplies in the Coral Triangle by reducing the footprint of fisheries & aquaculture**

***Asia’s little-known success in sustainable seafood***

WWF action can sustain and improve existing low footprint aquaculture and fisheries in Asia, which produce critically important food for mostly low income people. Asia’s existing aquaculture and fisheries have a lower average marine ecological footprint than Europe’s fisheries and aquaculture, an Asian sustainability success that is not widely appreciated. One example of seafood success in Asia is the low footprint of farmed carp, the most important food fish in the world.

The impacts of these actions include helping to secure vital food supplies for people who rely on fisheries and aquaculture, and helping to limit and reduce human-caused harm to coastal and ocean ecosystems in Asia and elsewhere.

WWF can sustain and improve low footprint aquaculture and fisheries by developing analysis and monitoring approaches that evaluate directly the footprint of fisheries and aquaculture. These approaches can be used to demonstrate Asian success stories in sustainable seafood and to expand on these successes. One example of this work would be to develop sustainability standards for low footprint species that currently lack standards (e.g. carp).

Most of the products of Asia’s existing low footprint aquaculture and fisheries are domestic food supplies, often for low income consumers. The sustainability of this sector is important for people and ocean ecosystems and cannot be assured by relying on demand for certified products from markets in Europe or North America, because the products are mostly not exported.

For example, improvements in aquaculture of carp and other low trophic level species that are domestically consumed (e.g. milkfish) can secure a low footprint food supply for people and protect ocean ecosystems by minimizing aquaculture impacts such as the consumption of fishmeal by farmed fish.

**Example of application in Indonesia:**

Indonesia relies heavily on seafood, most of it supplied by low footprint fisheries and aquaculture within Indonesia[[1]](#endnote-1). Indonesia’s national footprint for fisheries and aquaculture is already low, thanks to production of large quantities of seaweed and herbivorous (plant-eating) fish and invertebrates.

WWF is well positioned to promote sustainability for Indonesia’s non-export fisheries and aquaculture. Most of Indonesia’s fisheries and aquaculture production already have a low footprint, and WWF can catalyze the modest improvements necessary to ensure sustainability. Indonesia produces 5% of the world’s seafood with a low ecological footprint, and most (>80%) of this seafood is consumed within Indonesia. Protection of ocean ecosystems in Indonesia will require sustainability progress in the fisheries and aquaculture sectors that feed Indonesia.

WWF China is already leading WWF on this task, by promoting sustainability for low footprint farmed carp that are almost entirely consumed within China. Other WWF offices in Asia could follow the lead of WWF China and focus on non-export domestic food fisheries and aquaculture.

***The China Connection***

WWF actions can limit the harm to ocean ecosystems and fish-dependent people caused by growing seafood demand from China—demand that drives unsustainable fisheries & aquaculture worldwide. Two types of work are needed, improvement of China’s domestic seafood supply and improved governance of fisheries and aquaculture in areas that export to China. Making the case for this “China connection” can help secure funding and commitment to improved sustainability of low footprint seafood and improved fisheries governance for regions that export seafood to China.

**Improving the sustainability of China’s domestic seafood supply**:

Maintaining the sustainability of China’s domestic seafood supply can limit future demand for seafood imported into China. WWF China is targeting the sustainability of China’s carp aquaculture industry, the largest seafood industry in the world. WWF China deserves external support for this work because improving the sustainability of this low footprint food source will protect seafood security elsewhere by limiting the increase in China’s demand for imported seafood.

**Improving fisheries governance**:

Demand from China drives unsustainable practices in coastal fisheries of the Asia-Pacific region, threatening the food security of coastal communities. Improved governance is needed to secure long-term sustainability and food security for coastal communities.

The project has four main objectives:

1. Demonstrate the sustainability value of low footprint seafood production by developing and applying tools and approaches for measuring the marine ecological footprint of seafood production and promoting existing success stories.
2. Develop sustainability criteria for low footprint seafood and use criteria to build market demand for low footprint seafood.
3. Make the case for the global importance of China’s low footprint seafood production, focusing on the global consequences of increases in the marine ecological footprint of China’s seafood production.
4. Increase support and funding for protecting marine ecosystems by limiting the footprint of seafood demand from China, including efforts within China to support low footprint aquaculture and efforts to improve fisheries governance where fisheries may be impacted by increased demand from China.

WWF is working with an expert to implement the following:

1. Develop footprint analysis and monitoring approaches and find and promote low footprint success stories to catalyze footprint reduction elsewhere. This will include:
   1. An initial draft of the tools and approaches,
   2. A brief peer review,
   3. Trial applications to selected fisheries and aquaculture operations,
   4. Production of case study materials,
   5. Gaining visibility for success stories, and
   6. Promoting & advocating low footprint seafood.
2. Develop sustainability criteria for low footprint species that lack standards, and begin efforts to build market demand for low footprint seafood. This will include:
   1. General criteria for low marine ecological footprint seafood,
   2. Application to 1 species (e.g. perhaps milkfish in Indonesia or Philippines), and
   3. Seek support for low footprint seafood from at least one business buyer.
3. Make the case for the global importance of China’s low footprint seafood supply. This will include:
   1. Analyze trends for China’s low footprint seafood production (including social issues), and
   2. Compare future scenarios if low footprint seafood production declines.
4. Seek support for limiting the footprint of seafood demand from China. This will include:
   1. Make the case for social environmental and economic threats caused by seafood demand from China,
   2. Advocate external support and funding for improved fisheries governance where fisheries may be impacted by increased demand from China, and
   3. Advocate external funding and support for work within China to improve the sustainability of low footprint aquaculture.

**Key Deliverables**

1. Footprint analysis and monitoring approaches that can be applied to fisheries and aquaculture.
2. Case studies of existing success stories of low marine ecological footprint fisheries and aquaculture.
3. 3 placements of success stories in online or print publications.
4. Criteria for sustainability standard for low marine ecological footprint seafood.
5. Application of criteria to 1 species.
6. Support for low footprint seafood from 1 business buyer.
7. Analysis of global marine impacts if China’s low footprint seafood production declines.
8. Proposal for funding improved fisheries governance where fisheries may be impacted by increased demand from China.
9. Proposal for funding work within China to improve the sustainability of low footprint aquaculture.

1. |  |  |  |  |  |  |
   | --- | --- | --- | --- | --- | --- |
   | rank | Indonesia species |  | thousand tons produced, FAO 2010 | fraction | trophic level |
   |  | Eucheuma seaweeds nei | | 1938 | 0.32 | 1 |
   | 2 | Marine fishes nei | | 576 | 0.09 | 3.2 |
   | 3 | Scads nei |  | 327 | 0.05 | 3.6 |
   | 4 | Nile tilapia | | 305 | 0.05 | 2 |
   | 5 | Skipjack tuna | | 294 | 0.05 | 4.3 |
   | 6 | Milkfish |  | 277 | 0.05 | 2.03 |
   | 7 | Common carp | | 251 | 0.04 | 2.96 |
   | 8 | Short mackerel | | 249 | 0.04 | 2.72 |
   | 9 | Whiteleg shrimp | | 209 | 0.03 | 2.7 |
   | 10 | Gracilaria seaweeds | | 207 | 0.03 | 1 |
   | 11 | Stolephorus anchovies nei | | 200 | 0.03 | 3.22 |
   | 12 | Goldstripe sardinella | | 174 | 0.03 | 2.85 |
   | 13 | Giant tiger prawn | | 161 | 0.03 | 2.6 |
   | 14 | Yellowstripe scad | | 151 | 0.02 | 3.53 |
   | 15 | Kawakawa | false albacore | 142 | 0.02 | 4.5 |
   | 16 | Bali sardinella | | 139 | 0.02 | 2.48 |
   | 17 | Torpedo-shaped catfishes nei | | 129 | 0.02 | 3.4 |
   | 18 | Narrow-barred Spanish mackerel | | 128 | 0.02 | 4.5 |
   | 19 | Freshwater fishes nei | | 118 | 0.02 | 3.1 |
   | 20 | Snappers nei | | 109 | 0.02 | 4.3 |
   |  |  |  |  |  |  |
   |  |  | weighted average trophic level = 2.38 | | | |

   [↑](#endnote-ref-1)