



Reviewing the impacts and principles developed in FTAD 1+2

Impact = The problem we want to minimize

- Six to eight key impacts, not a laundry list
- Focus on environmental and social impacts

Principle = The high level goal for addressing each impact

- Simple
- Attainable



Draft impacts identified to date (FTAD1+2)

1. Water use
2. Escapes
3. Discharges
4. Habitat conversion
5. Fish health/welfare and disease transfer
6. Feed ingredients
7. Energy efficiency and carbon footprint
8. Predator control
9. Social/community impacts

Are these the key impacts?





Draft principles (FTAD1+2)

1. Obey all applicable international and national laws and local regulations
2. Conserve local habitat and biodiversity
(habitat conversion, escapees and predator control)
3. Minimize negative effects on water resources
(discharges, water use)
4. Proactively maintain the health and welfare of cultured fish and minimize risk of disease transmission
(fish health/welfare, disease transfer)
5. Use resources responsibly
(energy, CO2, feed ingredients)
6. Be socially responsible
(social/community impacts)



Criteria



The area to focus on to address the impact





Criteria examples



Principle

Use resources in an environmentally efficient and responsible manner

Criteria

- *Use of wild fish for feed (dependency on marine protein and lipid sources)*
- *Source of marine raw materials (i.e. origin of fish used in feeds)*
- *Source of vegetable raw materials in feed*
- *Non-biological waste from production*
- *Carbon footprint*
- *Non-therapeutic chemical inputs*



FTAD draft criteria

Developed in FTAD2



Principle 1: Comply with all applicable international, national and local laws and regulations

Criteria:

- Operate within the legal framework of applicable international, national and local laws and regulations



Principle 2: Conserve local habitat and biodiversity

This principle encompasses the impacts of: **habitat conversion, escapees and predator control**

Criteria:

- Indigenous flora and fauna
- High-value ecosystems (determining parameters for farm site locations)
- Predators
- Escapees (competing for habitat, genetic impact, disease transmission) *-grids, nets, closed systems*



Principle 3: Minimize negative effects on water resources

This principle encompasses the impacts of: **discharges and water use**

Criteria:

- Use of water (altering natural water flow, water table/groundwater depletion/saltwater intrusion)
- Effluent quality and load -*N, P, antibiotics, BOD*
- Impact on receiving body of water (receiving water carrying capacity/change)



Principle 4: Proactively maintain the health and welfare of cultured fish and minimize risk of disease transmission

This principle encompasses the impact of: **fish health/welfare and disease transfer**

Criteria:

- Survival and health of farmed fish
- Bio-security (disease-free eggs, hygiene (SSOP), staff capacity, traceability)
- Medical/chemical treatment
- Water quality on site - *temp, O2, pH*
- Care and handling (slaughtering/careful moving of fish etc)



Principle 5: Use resources responsibly

This Principle encompasses the impacts of: **energy efficiency, carbon footprint and feed ingredients**

Criteria:

- Energy usage and carbon footprint on production site
- Feeding regime - *FCR*,
- Source of marine raw material in feed
- Source of non-marine raw material in feed
- Use of wild fish for feed (dependency on marine protein and lipid source) - *Fish in Fish Out, FFER*



Principle 6: Be socially responsible

This principle encompasses: **social/community impacts**

- **WWF has hired consultant to develop social draft standards**

Criteria:

- 1) Freedom of association and collective bargaining
- 2) Child labor
- 3) Forced, bonded or compulsory labor
- 4) Discrimination
- 5) Health and safety
- 6) Wages
- 7) Labor contracts
- 8) Conflict resolution
- 9) Working hours
- 10) Living conditions
- 11) Co-existence with other community activities - *community access*