

MONTHLY REPORT (September 2011)– TECHNICAL

AQUACULTURE AREAS

There are 23 applications for aquaculture development licence to date and the Fisheries Division needs to finalise and gazette all the aquaculture areas before processing the licence. The application fee is T\$300 pa'anga but the licensing fee is based on category type. There are three categories, refer Schedule 3 (below):

SCHEDULE 3

Classification of Aquaculture Development

1. Category A

- (a) Freshwater hatcheries, raceways, freshwater cage culture of indigenous fish and self-contained ponds with no discharge outside the proponent's property boundaries.
- (b) Fresh water stocking with indigenous species.
- (c) Any other form of aquaculture not defined in this Schedule that is considered by the Technical Assessment Group to present a low risk of environmental harm or social cost.

2. Category B

- (a) Intertidal stick and rack culture, or hanging bag culture.
- (b) Marine longline culture that involves no feeding (indigenous species).
- (c) Land-based marine hatchery.
- (d) Open marine water restocking with indigenous species.

- (e) Any other form of aquaculture not defined in this Schedule that is considered by the Technical Assessment Group to present a moderate risk of environmental harm or social cost.

3. Category C

- a) Fresh water stocking with non-indigenous species.
- b) Open marine water restocking with non-indigenous species.
- c) Land-based pond culture using seawater (e.g. prawn farms, estuarine fish culture).
- d) Marine longline culture that involves no feeding (non-indigenous species).
- e) Cage culture of hatchery reared spat/fingerlings, or controlled on-growing of juveniles taken from the wild.
- f) Any other form of aquaculture not defined in this Schedule that is considered by the Technical Assessment Group to present an appreciable risk of environmental harm or social cost.

SCHEDULE 4

Guidelines for a Business Development Plan for Aquaculture

The following information should be provided:

- Location and area of the proposed business
- Nature of the operation, in terms of species to be cultured and method of aquaculture to be used
- Area of land or water proposed to be used for aquaculture
- Infrastructure associated with the proposed aquaculture operation
- Time over which the proposed aquaculture project is to be established, and phases in which the development is to occur

- Proposed annual production schedule
- Description of employment over the project's lifetime
- Detailed management plan that describes procedures for dealing with disease, predators, biofouling, machinery breakdown, equipment failure, theft and other contingencies
- A detailed, time-structured budget that estimates costs, income and cash flow throughout the proposed project's life
- Markets for aquaculture product, market size, price structure of market
- Details of the proponent's technical and management experience
- A summary of how the proposed aquaculture operation is to be financed

SCHEDULE 5

Guidelines for the conduct of environmental impact assessments

All aquaculture development licence applications must be accompanied by an Environmental Impact Assessment, based on these guidelines, other than those for freshwater or marine hatcheries.

Category A aquaculture proposals should include relevant information about –

1. the location of the proposed aquaculture venue, and the (physical) area in which the proposed aquaculture is to be developed;
2. a general description of the area in which the proposed aquaculture development is to occur. This description should include, but not necessarily be confined to, an overview of soil type, vegetation, fauna and the extent to which the site has been disturbed from its natural condition;
3. a description of the aquatic fauna in any natural water body that may be impacted by the proposed aquaculture operation, through either pond construction or release of aquaculture products;

4. proposed method of discharge from any ponds or raceways;
5. changes in water quality parameters in the immediate vicinity of the proposed aquaculture operation that may occur during the proposed aquaculture operations;
6. a description of the amount and nature of any chemicals to be used in the proposed aquaculture operation, and of their proposed methods of disposal;
7. a description of any disease monitoring and control methods to be used in the proposed aquaculture operation; and
8. a description of any changes to the environment, both within the proposed aquaculture area and in the immediate vicinity of the area, that may occur as a consequence of the proposed aquaculture operation.

Freshwater hatcheries:

The terms of Environmental Impact Assessment as developed by the Department of Environment (under the Environmental Impact Assessment Act 2002), and in consultation with the Aquaculture Advisory Committee. The Assessment will be used as the Environmental Impact Assessment as required under regulation.

Category B aquaculture proposals should include relevant information about -

1. the location of the proposed aquaculture venue, and the (physical) area in which the proposed aquaculture is to be developed;
2. a general description of the area in which the proposed aquaculture development is to occur. This description should include, but not necessarily be confined to, an overview of soil or seabed type, vegetation, fauna and the extent to which the site has been disturbed from its natural condition;

3. a description of native fish and other aquatic fauna in the area that may be impacted by the proposed aquaculture operation, through either pond construction or release of aquaculture products;
4. a description of any flora and fauna that will be disturbed or destroyed as a consequence of the proposed aquaculture operation;
5. a description of systems that will be used to ensure aquaculture equipment does not move from the proposed aquaculture site, if this is a relevant consideration;
6. proximity and nature of any other licensed aquaculture operations within 3 kms of the proposed aquaculture operation;
7. proposed method of discharge from any ponds or raceways;
8. changes in water quality parameters in the immediate vicinity of the proposed aquaculture operation that may occur during the proposed aquaculture operations;
9. a description of the amount and nature of any chemicals to be used in the proposed aquaculture operation, and of their proposed methods of disposal;
10. a description of fouling organisms that may develop in the course of the proposed aquaculture operation, and of their proposed methods of disposal;
11. a description of any disease monitoring and control, and parasite control, methods to be used in the proposed aquaculture operation;
12. details of any monitoring of environmental parameters in and adjacent to the proposed aquaculture operation, including monitoring to examine if native species are being displaced, if this is a relevant consideration; and

13.a description of any changes to the environment, both within the proposed aquaculture area and in the immediate vicinity of the area, that may occur as a consequence of the proposed aquaculture operation.

Coastal marine hatchery (land based):

Terms of Environmental Impact Assessment as developed by the Department of Environment (under the Environmental Impact Assessment Act 2002), and in consultation with the Aquaculture Advisory Committee. The Assessment will be used as the Environmental Impact Assessment as required under regulation.

Category C aquaculture proposals should include relevant information about -

1. the location of the proposed aquaculture venue, and the (physical) area in which the proposed aquaculture is to be developed;
2. a general description of the area in which the proposed aquaculture development is to occur. This description should include, but not necessarily be confined to, a description of soil or seabed type, vegetation, fauna and the extent to which the site has been disturbed from its natural condition;
3. a description of disease and parasite monitoring and surveillance of any animal proposed for aquaculture that is not indigenous to the Kingdom of Tonga and is to be introduced into the Kingdom's waters;
4. a description of native fish and other aquatic fauna in the area that may be impacted by the proposed aquaculture operation;
5. a description of any flora and fauna that will be disturbed or destroyed as a consequence of the proposed aquaculture operation;
6. a description of systems that will be used to ensure aquaculture equipment does not move from the proposed aquaculture site, if this is a relevant consideration;

7. proximity and nature of any other licensed aquaculture operations within 3 kms of the proposed aquaculture operation;
8. proposed method of discharge from any ponds or raceways;
9. changes in water quality parameters in the immediate vicinity of the proposed aquaculture operation that may occur during that operation;
10. potential impact of the proposed aquaculture operation on groundwater in the immediate vicinity of that operation;
11. a description of the amount and nature of any chemicals to be used in the proposed aquaculture operation, and of their proposed methods of disposal;
12. a description of fouling organisms that may develop in the course of the proposed aquaculture operation, and of their proposed methods of disposal;
13. a description of any disease monitoring and control, and parasite control, methods to be used in the proposed aquaculture operation;
14. details of any monitoring of environmental parameters in and adjacent to the proposed aquaculture operation, including monitoring to examine if native species are being displaced, if this is a relevant consideration; and
15. a description of any changes to the environment, both within the proposed aquaculture area and in the immediate vicinity of the area, that may occur as a consequence of the proposed aquaculture operation.