Identification and implementation of aquaculture development areas in Queensland

Fisheries Queensland
Department of Agriculture and Fisheries
Queensland Government endorsed key recommendations to facilitate expansion of aquaculture in Queensland while addressing environmental concerns:

• creation of terrestrial ADAs (450 hectares suitable for aquaculture operations)
• develop assessment codes (regulatory conditions for aquaculture in each ADA)
• provide certainty about the future price and availability of environmental offsets
• investigate the potential for marine aquaculture development areas
The Department of Agriculture and Fisheries is leading the delivery of the QCA recommendations with input from other government agencies and the aquaculture industry.

The Aquaculture Advisory Committee (AAC) oversees the implementation of the recommendations endorsed by the Queensland Government.

AAC Members include:
- Australian Barramundi Farmers Association
- Australian Prawn Farmers Association
- Department of Agriculture and Fisheries
- Department of Environment and Heritage Protection
- Department of Infrastructure, Local Government and Planning
- Department of Science, Information Technology and Innovation
- Department of State Development
- Department of Natural Resources and Mines
- Queensland Treasury
- Great Barrier Reef Marine Park Authority
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- James Cook University.
Identification of Aquaculture Development Areas (ADAs)

Target: 450ha of coastal land suitable for culturing high value marine species requiring access to seawater
Methodology for identifying suitable locations for coastal land-based aquaculture

The planning process for ADA selection:

Phase 1 – Methodology and selection criteria
Phase 2 – GIS modelling
Phase 3 – Consultation and validation of GIS model
Phase 4 – Technical investigations on potential ADAs
Phase 5 – Recognition of ADAs
Phase 6 – Release and promotion of ADAs
Methodology for identifying suitable locations for coastal land-based aquaculture

Phase 1 – Selection criteria for identifying investigation areas

Identify opportunities and constraints

- Physical (elevation, slope, access to water)
- Planning (zoning, tenure)
- Socioeconomic (landuse conflicts, native title)
- Infrastructure (transport, labour, power)
- Environmental (protected and environmentally significant areas)
Methodology for identifying suitable locations for coastal land-based aquaculture

Phase 2 – Desktop GIS Modelling

- spatial data layers (opportunities/constraints) applied to area of interest
- areas with best combination of desirable physical characteristics and minimal constraints are of most interest
Area of Interest

Land up to 5km from coast/estuarine water supply
Scoring

- Zero (0) not considered
- > 0 possible
- highest scores most desirable
Constraints

- MSES
- MSES drainage lines
- Regulated vegetation (clearing)
- Agricultural Land Class A/B
Areas with least constraints
Where are the best areas?
Expansion opportunities for existing aquaculture operations
Potential Aquaculture Expansion
Next Steps

Refine clusters and expansion areas

• Information layers
• Targeted consultation (Govt agencies, LGAs and industry)
Information Layers

- Commonwealth constraints
- Groundwater vulnerability
- Access to water source/discharge area
- Current land use
- Prior land use/contaminated land
- Potential land use conflicts
- Key resource areas (KRAs)
- Buffers (e.g. WPA trigger areas)
- Separation distances
Information Layers

- Acid sulphate soils
- Soil clay content (e.g. > 20% clay)
- Hazard areas (e.g. Q50/Q100 flood level)
- Floodplain assessment
- Distance to power, transport, services, etc.
- Native title/cultural heritage
Information Layers – discharge issues

- GBRMPA catchments (nutrient load limits)
- Assimilative capacity of receiving waters
- Environmental values/water quality objectives/management intent of receiving waters
- Discharge limits/offsets

Which receiving waters are more/less constrained due to discharge considerations?
Information sought from industry and local councils

- Expansions Areas – which ones are suitable and which ones are not.
- Greenfield sites – which ones are of interest and which ones are not.
- Areas that have not been identified that should be investigated.
- Seawater access. Intake/discharge points are appropriate.
- GIS methodology/scoring is appropriate
- additional data layers that need to be considered
Implementation

- Two planning options are being investigated to implement ADAs
  - ADAs declared as State Development Areas
  - Recognition of ADAs under the State Planning Policy
- Preferred approaches to include water quality discharge requirements into assessment codes for each ADA are being explored
  - Model operating conditions
  - ERA standards
That's all Folks!