Climate change and UK seafood: Example impacts and adaptation responses in key sources of aquaculture production









- Broaden integrated health management tools. Investigate alternative
- Introduce early warning systems for extreme events.

SEABASS

 Investing in more resilient farm infrastructure.

FINFISH

 Adjusting farm management strategies to reduce risk.

Increased storminess

mooring and human

safety.

threatening cages, cage

Increased temperatures

consequences for fish

produce negative

health and welfare.

 Expanding mixed-species culture to support resilience

> Encouraging mangrove planting and pond fortification.

> > Investment in

recirculation

· Changes in industry

procedures, and

development of

codes of practice.

practice and

operating

systems.

 Develop selective breeding programmes to focus on disease resistance.

· Risks to human safety,

fish health and welfare

fish production and

production stages.

across several

 Continued evolution of production systems.

Temperature change

results in increased

drought and mass

Increased rainfall/run-off

opportunistic pathogens,

contaminants but also

cultivate novel species.

the opportunity to

is increases levels of

mortality events.

 Using certification initiatives to support farm management best practice.

· Explore species more

tolerant of saline and

warmer waters.

 Ensure flexible and adaptive regulation / management.

 Examine wider ecosystem responses of other species.

• Broaden integrated health management tools and improve storm modelling.

Optimise site

selection.

transport

arrangements.

· Development of engineering standards for farm infrastructure.

 Evaluating alternative species tolerant of warmer temperatures.

 Increased storminess threatening cages, cage mooring and

· Strategies for: controlling temperature in hatcheries and juvenile production.

 Environmental monitoring and prediction.

 Increased temperatures produce negative consequences for fish health and welfare.

human safety.

 Temperature change threatens maintenance of existing species but provides opportunities to cultivate novel species.

Spat collection undermined by storms, acidification and rainfall/run-off.

> Temperature change may close some collection areas and open others.

UK **SHELLFISH**

WARM WATER

PRAWN

· Increase the level of environmental monitoring.

 Develop procedures to handle new sources of contamination.

 Further research to help industry manage and explore opportunities in new conditions (e.g. new species).

 Use breeding programmes to select fish that are more

robust.

 Processors diversifying their supply lines to ensure continuity.

> Explore use of existing species, modelling, to support production.

· Improving fish health and welfare.

SALMON

· Siting cages in most appropriate locations.

· Increasing fish

robustness.

 Improved environmental modelling and monitoring.

> Improving robustness of fish and fish operations.

· Expanding and broadening integrated health management tools.

 Explore opportunities for spatial utilisation, co-existence opportunities and new / existing species.

 Use breeding programmes to help select more robust fish, tolerant of changing marine conditions.

space for new and and improve storm Investment to support

SALMON

operating

practices.

POTENTIAL CLIMATE

ADAPTATION

ALREADY UNDERWAY

SHORT TERM: MEDIUM TERM:



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KEY SPECIES OF IMPORTANCE TO UK SEAFOOD