Additional Table S1: Calculations and parameters involved in the bio-economic model.

Parameters	Formulas
Fish model	
Thermal growth coefficient (TGC) : *1-b = weight exponent = 0.51* *K_i = daily corrected temperature* *W_H (harvest weight) = 13 g* *W_I (initial weight) = 1300 g* *n is the length of growing period until harvest weight*	$\mathrm{TGC} = \frac{\mathrm{W_H^{1-b}} - \mathrm{W_I^{1-b}}}{\sum_{i=1}^{n} \mathrm{K_i}}$
Fish weight (W_n) in kg :	$W_n = [\mathrm{W_I^{0.51}} + (\mathrm{TGC} \times \sum_{i=1}^{n} \mathrm{K_i})]^{1/0.51}$
Daily weight gain (DWG_n) in g :	$\mathrm{DWG_n} = \mathrm{W_n} - \mathrm{W_{n-1}}$
Feed conversion ratio (FCR_{Wn}) in g/g :	$\mathbf{FCR_{Wn}} = \boldsymbol{\alpha} \times \frac{\mathbf{W_n^{0.14}}}{\mathbf{1.318} - (\mathbf{0.103} \times \mathbf{T_i}) + (\mathbf{0.007174} \times \mathbf{T_i^2}) - (\mathbf{0.0001395} \times \mathbf{T_i^3})}$
Daily feed intake (DFI_n) in g :	$\mathrm{DFI_n} = \mathrm{DWG_n} \times \mathrm{FCR_{Wn}}$
Daily dissolved N (**$N\_dissolved_n$**) in g:	$\mathrm{N\_dissolved_n} = \mathrm{DWG_n}((65.988 \times \mathrm{FCR_{Wn}}) - 25)$
Daily emission of P in effluent water (P_eff_n) in g:	$\mathrm{P\_eff_n} = 00876\ \mathrm{DFI_n} - 004\ \mathrm{DWG_n}$
Batch model	
Biomass of fish of 10 g stocked per batch ($biomass_{ini}$) - *Maximum_standing_stock = 435 tons* - *j = number of batch reared simultaneously (34)* - *$biomass_i$ = biomass of batch i a maximum standing stock*	$biomass_{ini} = \frac{\mathrm{maximum\_standing\_stock}}{\sum_{i=1}^{j} biomass_i}$