Creating added value in RAS aquaculture through innovative technology integration

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Aquaculture can be found all around the world.
Most places it looks like this!

Degree of Re-circulation - by Increasing use of technologies

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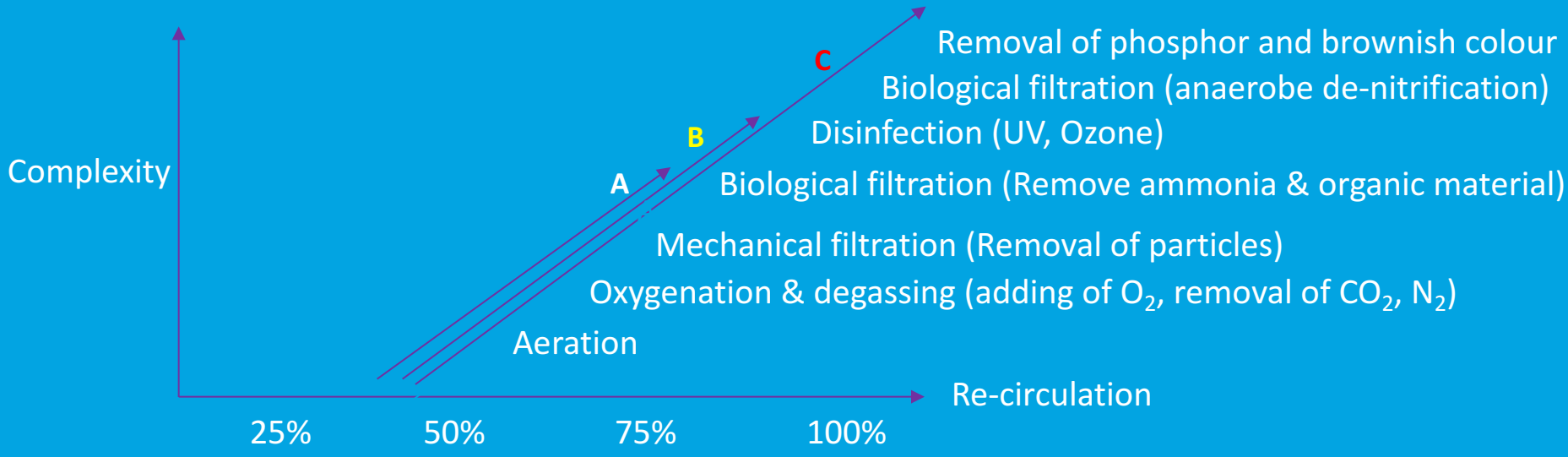


Flow through systems	40.000 - 50.000	Litre of new water/kg fish produced/year
A: Semi RAS	2.000 - 5.000	Litre of new water/kg fish produced/year
B: Moderate RAS	**400 - 700**	**Litre of new water/kg fish produced/year**
C: Intensive RAS	50 – 400	Litre of new water/kg fish produced/year

Definition of Re-Circulation

Water exchange per amount of feed put into the system per day is the most accurate definition.

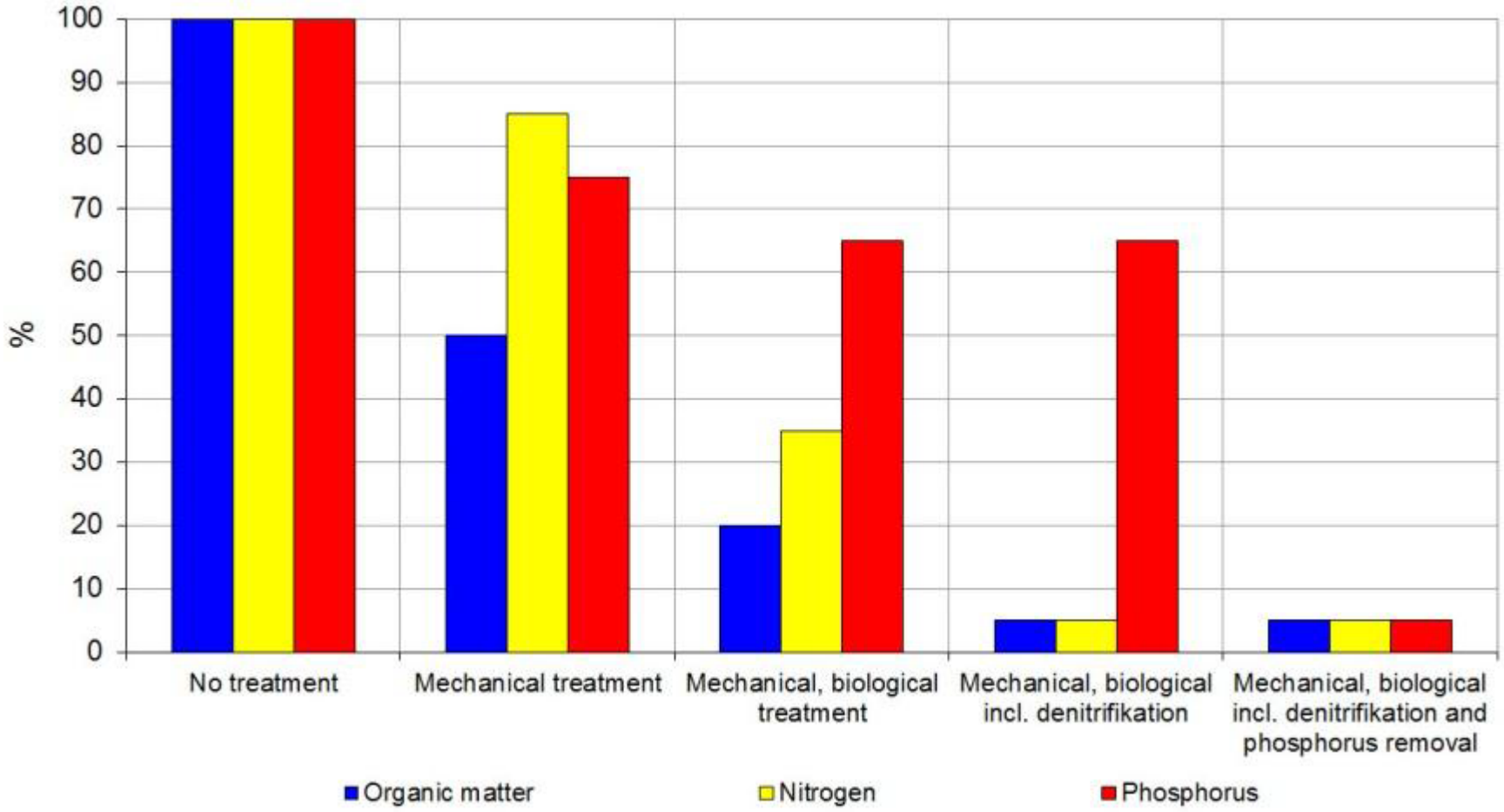
$$\text{Water exchange per kg feed} = \frac{\text{Water exchange/day } (m^3/\text{day})}{\text{Feeding/day (kg/day)}}$$

$$\text{Water exchange per kg feed} = \frac{120\ (m^3/\text{day})}{300\ (\text{kg/day})}$$

Water exchange per kg feed = 400 l/kg feed

The water consumption per kg fish produced is thus depending on the farmers skill:
If feed conversion ratio (FCR) is 1, the water exchange per kg fish produced will be 400
If FCR = 0,9 consumption will be 360 litre per kg fish produced
If FCR = 1,1 consumption will be 440 litre per kg fish produced

Technology reduces nutrient outlet



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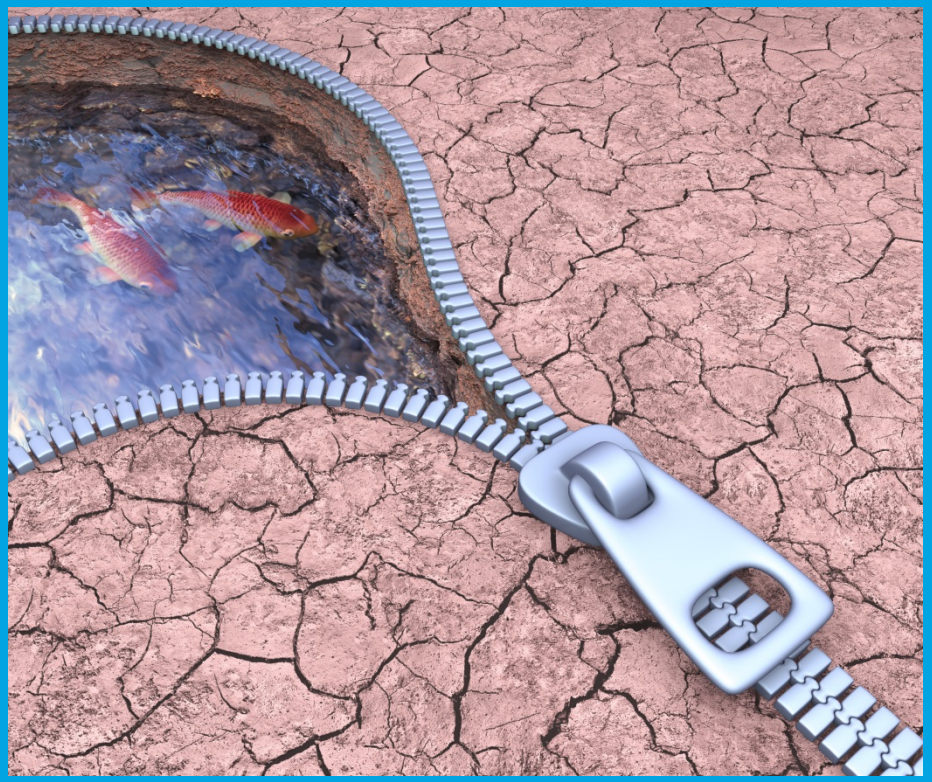

Unzip the potential…..
Recirculated Aquaculture!

Farm fish everywhere with very little water and a very low environmental footprint

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And now – let's hear how to create added value in RAS aquaculture through innovative technology integration.

Adrian Bischoff-Lang, University of Rostock:
InnoAquaTech – Cross-border cooperation for integrating innovative RAS technology within the South Baltic Region.

Peter Zeller, Fresh Corporation AG:
It's fresh seafood – but there's no 'sea' required.

Michael Bech, Krüger A/S:
RAS2020 – Landbased Farming for the Future.

Jonathan Trent, Omega Global Initiative:
Innovation at thee Food, Water, Energy Nexus:
'You can bet your RAS'