

Innovative technologies in Aquaculture Poland

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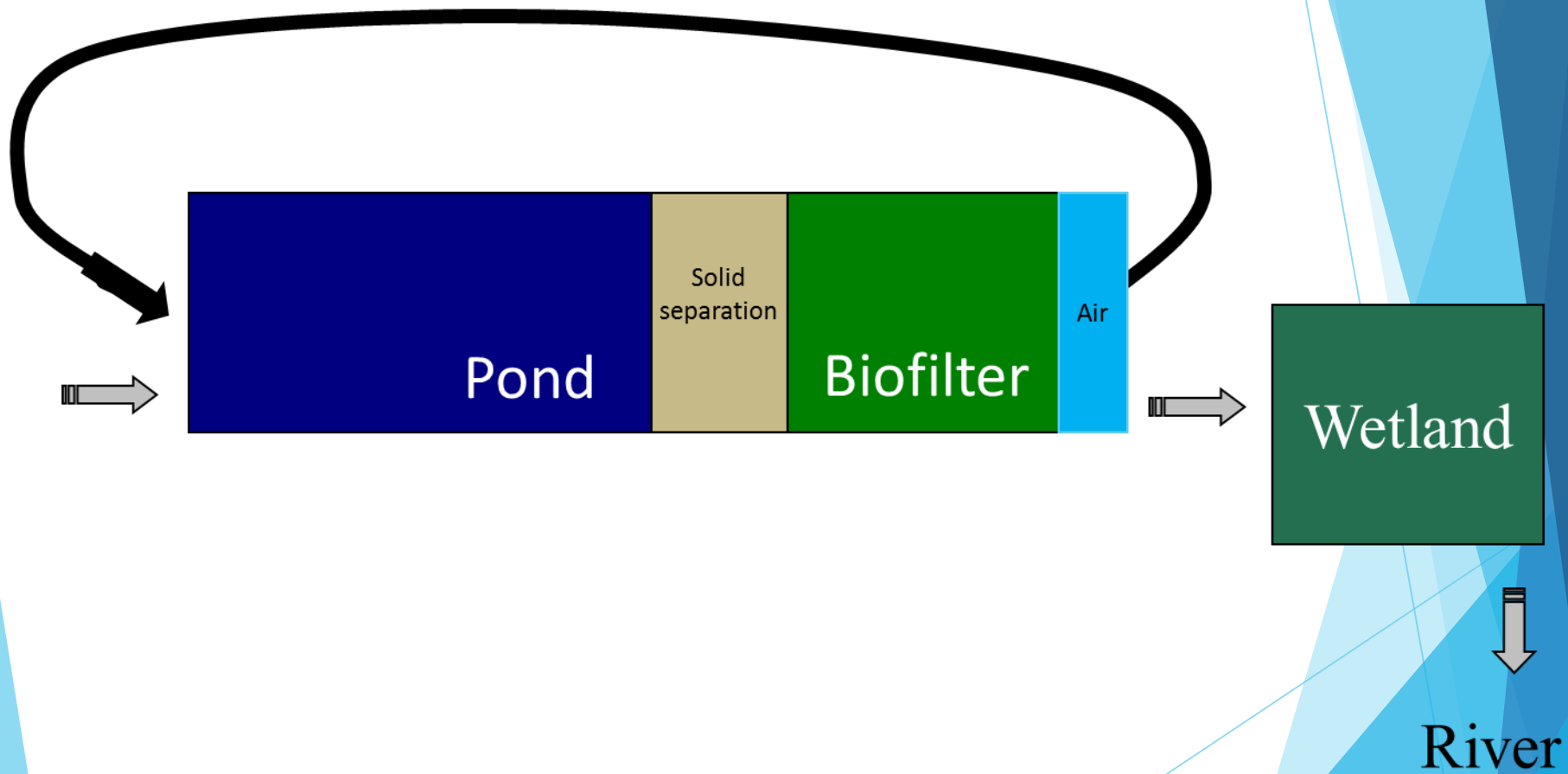
Agenda

1. Aquaculture production in PL
2. Basic concept of RAS technology
 - biofiltration
 - mechanical filtration
 - advantages
 - sustainable growth
3. farm's technology examples
4. Modern infrastructure solutions
5. Challenges

Total aquaculture production for the Republic of Poland (tonnes)
Source: FAO FishStat



Concept of RAS



biofiltration





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Mechanical filtration



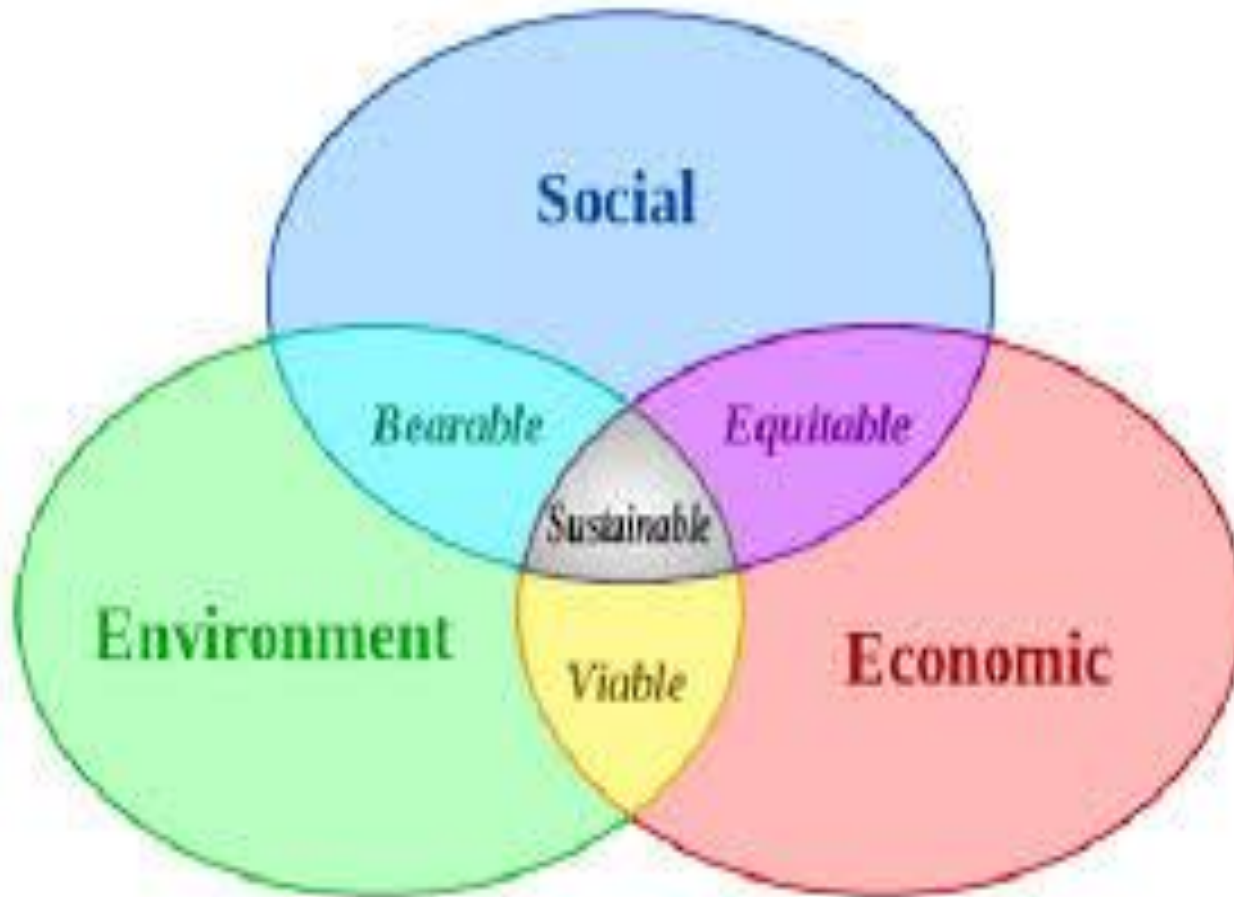


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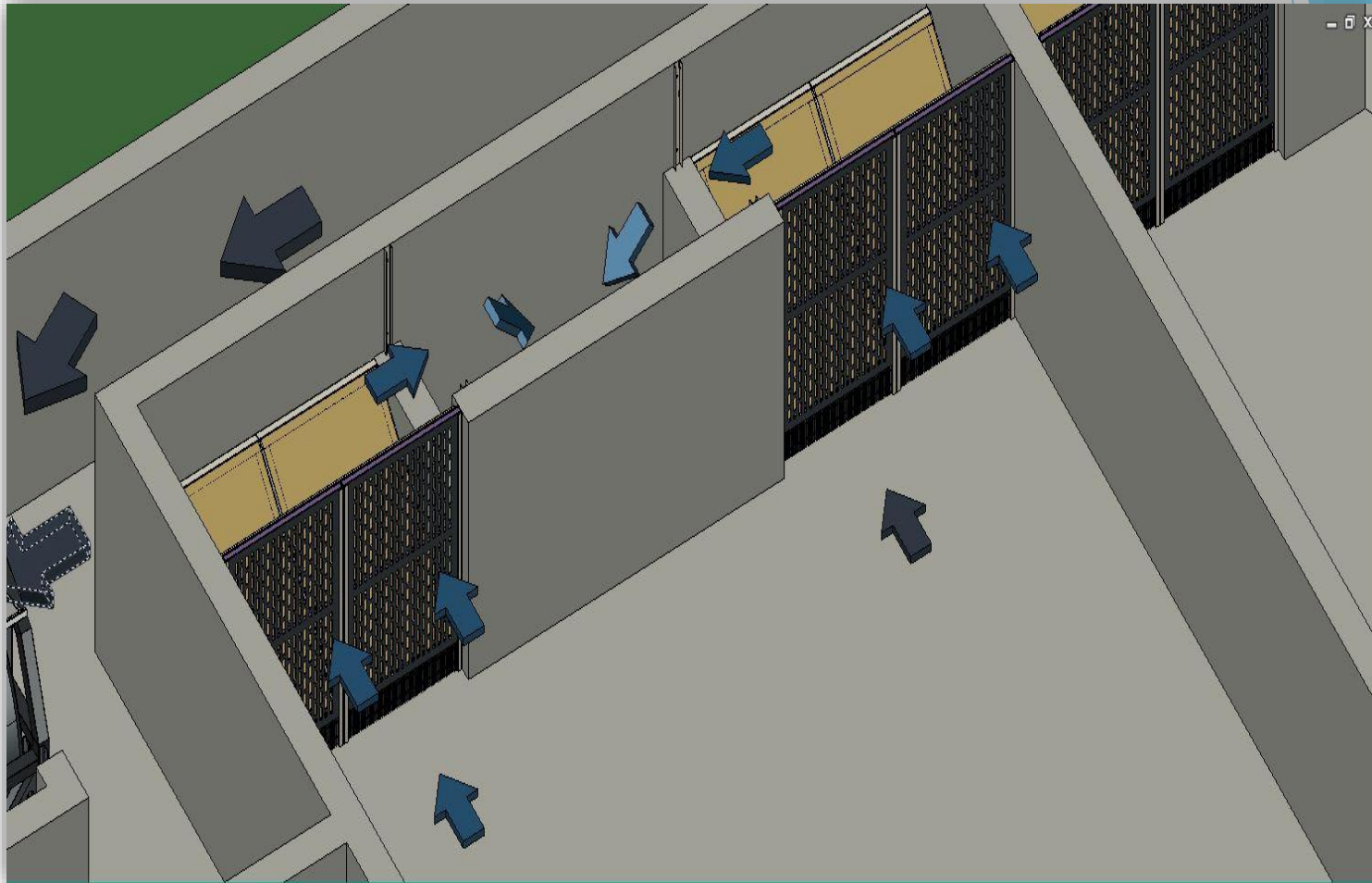


- Cost effectiveness:
 - Thermal stabilization thus optimized feeding;
 - stocking density up to 100 kg/m³
 - Energy cost reduction
 - Labor cost reduction
 - bio-security
- Public approval

Sustainability model









Farm in Nowina



Modern infrastructure facilities

Automatic feeding system



Aeration and oxygenation



Monitoring program

- Control of ammonium and nitrites
 - Ammonium 0,0125 mg/l
 - Nitrites – 0,2 mg/l



- Undisturbed aquaculture production growth for 2 decades has been stopped.
- Legislation burdens together with decrease in rentability as well as viruses has put the sector in a difficult situation.

SOLUTIONS

- Diversification of sales through direct sale of processed fish to local market
- development of public approach of aquaculture as sustainable sector supplying healthy food (international level consultancy process)
- Further investigation of possibility to attach aquaponic production to fish farming
- replacement of antibiotics with probiotics, prebiotics and bacteriophages
- Energy cost reduction through application of photovoltaics



Thank you for your attention



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