Eutrolife
Circular water treatment

BY: MIMI CREW
Globally, the number of lakes with harmful algal blooms is estimated to increase by 20% by 2050.
GUATAPÉ, ANTIOQUIA

BACTERIA AMENAZA EL EMBALSE

Cuidado:
Si el agua está verde, evita el contacto
Esta puede ser perjudicial para tu salud
Problem

Industrial discharges  Fish Farming  Fertilizers
Problem

Excessive biomass growth

Death in the ecosystem
Problem

Death in animals

Health issues
Biomimicry

Filtering

Distributing

Clustering
Eutrolife solution

1. Size exclusion filter (Inspired by Devil rays)

2. Nanofilter (Inspired by the Salps)

3. Immobilized nutrients in polymer

4. Optimization through clustering

1.5 cm
Water treatment competitors

<table>
<thead>
<tr>
<th>Feature</th>
<th>Eutrolife</th>
<th>LG Sonic</th>
<th>Biohbak</th>
<th>Severn Trent</th>
<th>Veolia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low cost</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>No use of harmful chemicals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Easy to install</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Low maintain</td>
<td>✓</td>
<td></td>
<td>❌</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Up cycling waste</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Highlights of Eutrolife

Unique process
No need of separate steps

Up-cycling waste
Converting waste into resources

Non-disruptive solution
No need of harmful chemicals

Positive social and economic impact
New job opportunities for locals
Two Markets

- Water remediation
- Biomass: Algae, Cyanobacteria

- Crops
- Livestock farms
- Houses and farms
- Local governments
- Schools and universities
- Countryside clubs

Microalgae
Biomass compartment
Nanofilter

Cyanobacteria
Cyanotoxins (Lab tests)

Industries
Markets sizes

$211.3 Billion

Water and wastewater treatment global market by 2025

$186 Billion

Bioremediation global market by 2023

$6 billion

USA government investment

$ 1.1 million

Norwegian government investment

$ 5.17 Billion

Algae products global market by 2023
Investment

$98,500
Initial investment

<table>
<thead>
<tr>
<th>Item</th>
<th>Approx. price</th>
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</thead>
<tbody>
<tr>
<td>Electrospinning equipment</td>
<td>200,000 USD</td>
</tr>
<tr>
<td>Eutrolife device</td>
<td>20,000 USD</td>
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<tr>
<td>Start-up back up</td>
<td>50,000 USD</td>
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<tr>
<td>Lab supplies</td>
<td>28,500 USD</td>
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</tbody>
</table>

One-time expenditure
Eutrolife current status

- 3D Imprinted filter
- Microscopic aspect
- Immobilization in beads
- 3D profile
- Macroscopic appearance
- Polymeric beads
- Absorption Island

Improvements
Mimicrew

Jennifer Balcucho Escalante  David Sánchez Nielsen
  Co-founder  Co-founder
  Industrial microbiologist  Architect

Sebastián Balcucho Escalante  Joan Berrío Casilimas
  Economist  Biologist

Andrés Cardona Mora
  Civil engineer
Thanks for your attention