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## 1. ANTIBIOTICS IN THE ENVIRONMENT

**Sources:** wastewater effluents & sludge, manure, medicated feed in aquaculture

**Fate:** groundwater, rivers, coastal areas

**Impacts:** bioaccumulation, disturbed metabolism, microbial communities, antibiotic resistance & risks to human health

## 2. AIMS OF THE PROJECT

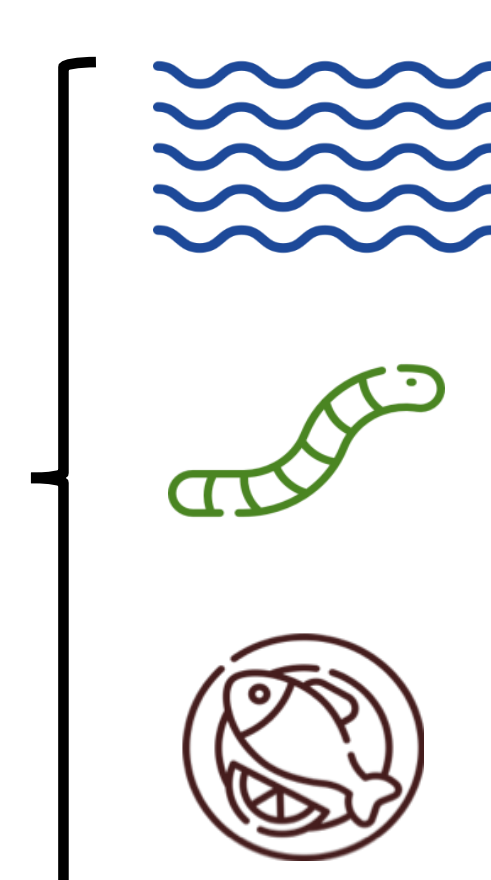
**Occurrence:** antibiotic contamination from sources to aquaculture, its products and surrounding environment

**Early-warning tools:** rapid detection of antibiotic residues in environmental / food samples. Development & Comparison with conventional methods

## 3. WORKFLOW OF THE PROJECT



- Different sampling **seasons:** summer / winter
- Different **sample types:** farms & effluents, surrounding environment (water, sediments, benthic fauna), food products



## TARGET AND SUSPECT SCREENINGS

- Upgraded multiresidue method for ~ 30 antibiotics (LC-MS/MS)
- Suspect screening of other antibiotics, TPs & additional contaminants
- Comparison with data from antibiotic sensor (flow-citometry based) as early-warning tool



## 4. EXPECTED OUTCOME

- **Risk assessment** of antibiotics in aquaculture settings
- **Mitigation** of associated impacts

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