

Horizon Europe Cluster 6 2026-2027

We have sorted the calls for projects from Horizon Europe Cluster 6 2026-2027 according to the impact that microfluidics can have on the calls for projects and related topics. We are sharing our analysis in case it can help you with project funding efforts. And, of course, if our expertise can be of use to you, we would be delighted to discuss it further.



How to read the stars in terms of the % of microfluidic technologies' relevance for the call:

By microfluidic relevance, we mean the relevance of using microfluidic technologies for the topic cited. But also, to a lesser extent, what a microfluidic laboratory or SME could contribute to the topic (mainly for calls with low relevance to microfluidic technologies).

Relevance (%)	90-100	80-89	70-79	60-69	50-59	40-49	30-39	20-29	10-19	0-9
Relevance (*)	****	***	***	**	*	1				

Administrative dates per call:

2026-01-CIRCBIO-two-stage, 2026-01-BIODIV-two-stage, 2026-01-ZEROPOLLUTION-two-stage:

Opening 08 Jan 2026; Deadlines 10 Mar 2026 (Stage 1), 15 Sep 2026 (Stage 2).

2026-03-GOVERNANCE-two-stage, 2027-02-FARM2FORK-two-stage: Opening 08 Jan 2026; Deadlines 12 Mar 2026 (Stage 1), 15 Sep 2026 (Stage 2).



DOCUMENT CONFIDENTIEL MICROFLUIDICS INNOVATION CENTER

2026-01-BIODIV, 2026-01-CIRCBIO, 2026-01-ZEROPOLLUTION: Opening 08 Jan 2026; Deadline 10 Mar 2026

2026-02-FARM2FORK, 2026-02-CLIMATE, 2026-02-COMMUNITIES: Opening 08 Jan 2026; Deadline 14 April 2026

2026-03-GOVERNANCE: Opening 08 Jan 2026; Deadline 12 Mar 2026

2026-04-GOVERNANCE-01: Opening 25 Aug 2026; Deadline 26 Nov 2026

2027-01-BIODIV, 2027-01-CIRCBIO, 2027-01-ZEROPOLLUTION, 2027-02-FARM2FORK, 2027-02-CLIMATE, 2027-02-COMMUNITIES, 2027-03-GOVERNANCE: Opening 26 Nov 2026; Deadline 09 Mar 2027

2027-01-BIODIV-two-stage, 2027-01-CIRCBIO-two-stage, 2027-02-FARM2FORK-two-stage, 2027-02-CLIMATE-two-stage: Opening 26 Nov 2026; Deadlines 09 Mar 2027 (Stage 1), 14 Sep 2027 (Stage 2).



Microfluidics

TOPICS WITH Microfluidics RELEVANCE ≥ 50% (sorted by decreasing relevance)

***** HORIZON-CL6-2027-02-FARM2FORK-07 - TOWARDS COMMERCIALIZATION OF FOOD SYSTEMS

MICROBIOME SOLUTIONS

Type of action: IA

Budget (M€): 17.50; Expected EU contribution/project (M€): 8.75; # projects: 2

Scientific focus: Push promising microbiome-based solutions along the last translational mile:

pilot manufacturing, validation in operational environments, regulatory and safety dossiers,

consumer/market readiness, and integration in food value chains. Prioritizes demonstrators

that reduce environmental footprint and improve resilience/health aspects of food systems.

Why microfluidics matters:

High-throughput screening and optimization of microbial consortia in droplet

microfluidics to accelerate strain/consortium selection and formulation robustness.

Miniaturized bioprocess development (parallelized micro-bioreactors) to de-risk

scale-up and map design space (pH, oxygen, feed strategies) under industry-relevant

conditions.

On-chip analytics (metabolites, viscosity, rheology, live/dead, biofilm propensity) to

compress iteration times from weeks to days.

Regulatory-aligned QC workflows (sterility, contamination, batch consistency) using

lab-on-chip methods that can port to GMP environments.

Encapsulation/micro-delivery formats (e.g., microgels) to stabilize live microbes or

post-biotics in real matrices.

***** HORIZON-CL6-2026-02-FARM2FORK-11 - INTEGRATING A HOLISTIC PERSPECTIVE IN

MICROBIOME RESEARCH FOR RESILIENT, COMPETITIVE AND SUSTAINABLE FOOD SYSTEMS

Type of action: RIA

Budget (M€): 13.50; Expected/project: 6.00-7.00; # projects: 2

Scientific focus: Advance integrative microbiome science across the food system (soil-plant-

animal-human interfaces), bringing together multi-omics, longitudinal field studies, and

system-level modelling to derive actionable interventions for resilience, competitiveness, and



sustainability. Emphasis on harmonized methods, data interoperability, and translation across sectors.

• Why microfluidics matters:

- Single-cell & droplet-based culturomics to access uncultured taxa and quantify interaction networks.
- Lab-on-chip perturbation platforms to test diet, stressors, or agrochemical exposures on complex communities.
- Ultra-low-volume library prep and on-chip sample handling reduce bias/costs for metagenomics/metabolomics.
- Standardization: microfluidics can contribute interoperable on-chip SOPs and reference materials for cross-study comparability.

**** HORIZON-CL6-2026-01-BIODIV-03 - DEVELOPING METHODS TO ASSESS THE PRESENCE, FUNCTIONS, AND SENSITIVITY OF GROUNDWATER ECOSYSTEMS

- Type of action: RIA
- Budget (M€): 10.00; Expected/project: ~5.00; # projects: 2
- Scientific focus: Develop robust methodologies to detect and characterize groundwater biota
 and functions, link ecological status to pressures, and build risk indicators and sensitivity
 thresholds to inform policy. Includes method harmonisation and integration in monitoring
 frameworks.

• Why microfluidics matters:

- o **In-situ and portable chips** for **eDNA/eRNA capture**, pre-concentration and qPCR/CRISPR-based detection from low-biomass samples.
- On-chip micro-ecosystem assays to probe functional responses (e.g., redox cycling, nutrient turnover) under controlled gradients mimicking aquifer conditions.
- o **Droplet & digital assays** for sensitive quantification of rare taxa and AMR genes.



Microfluidics Innovation

**** HORIZON-CL6-2026-01-ZEROPOLLUTION-01-TWO-STAGE - DECONTAMINATE AND

BIOREMEDIATE AQUATIC POLLUTION

Type of action: RIA

Budget (M€): 23.00; Expected/project: 7.00-8.00; # projects: 3

Scientific focus: Deliver effective solutions - especially life-science/biotech-based - to

bioremediate and decontaminate marine, freshwater, and groundwater pollution, focusing on

PFAS, antimicrobials, and microplastics; integrate effect-based and high-resolution

monitoring and demonstrate pollutant pathways to guide management actions.

Why microfluidics matters:

High-throughput screening of strains/enzymes/sorbents against PFAS & CECs in

droplet reactors.

Chip-integrated effect-based assays (cell-on-chip, organ-on-chip) to quantify toxicity

reduction.

Microfluidic fractionation of micro-/nanoplastics and on-chip sensors for in-line

monitoring during pilots.

**** HORIZON-CL6-2026-01-CIRCBIO-07 - ADVANCING THE EUROPEAN BIO-BASED INNOVATION

ENABLED BY BIOTECHNOLOGY AND BIOMANUFACTURING CONCEPTS

Type of action: RIA

Budget (M€): 12.00; Expected/project: 4.00; # projects: 3

Scientific focus: Develop next-gen biomanufacturing concepts (strain engineering, continuous

bioprocesses, modular units), with attention to productivity, robustness, standardization, and

sustainability metrics in bio-based value chains.

Why microfluidics matters:

ο **μ-bioreactor arrays** for design-build-test-learn at minimal volumes;

o **On-chip PAT** (optical/impedance/chemistry) for real-time control;

Scaling laws from chip-to-pilot using microfluidics 's multiphase/segmented-flow

expertise.



Microfluidics

**** HORIZON-CL6-2027-02-FARM2FORK-03 - MICROBIOME FOR LIVESTOCK SUSTAINABILITY AND **HEALTH WITHIN A ONE HEALTH APPROACH**

• Type of action: RIA

Budget (M€): 13.00; Expected/project (M€): 6.50; # projects: 2

• Scientific focus: Integrate host-microbiome knowledge for livestock health, productivity, and reduced emissions/AMR within a One Health frame; combine longitudinal cohorts,

multi-omics, and intervention studies.

Why microfluidics matters:

o Gastro-intestinal organ-on-chip to evaluate feed additives/probiotics under realistic

shear, pH and mucus conditions.

Single-cell analytics to map microbial responders and resistance gene mobility.

Rapid on-farm chips for pathogen/AMR surveillance (sample-to-answer).

**** HORIZON-CL6-2026-01-CIRCBIO-11 - HARNESSING THE UNIQUE PROPERTIES OF MARINE ORGANISMS TO DELIVER SUSTAINABLE BLUE BIO-BASED PRODUCTS

Type of action: RIA

Budget (M€): 10.00; Expected/project: 5.00; # projects: 2

Scientific focus: Discover and valorize marine organisms for novel bio-based products;

upstream discovery to proof-of-concept, with sustainability and standardization aspects.

Why microfluidics matters: Droplet-based discovery platforms for enzyme/metabolite

screening, picolitre culture of rare marine strains, on-chip bioassays for anti-fouling/

antimicrobial/biomaterial properties.

**** HORIZON-CL6-2026-02-FARM2FORK-06 - ADVANCED INNOVATIVE SOLUTIONS FOR IMPROVED

COMPETITIVENESS AND SUSTAINABILITY IN CONTROLLED ENVIRONMENT AGRICULTURE (CEA)

• Type of action: IA

• Budget (M€): 12.00; Expected/project: 6.00; # projects: 2



> Scientific focus: Demonstrate advanced CEA (greenhouses, vertical farming) integrating sensing, automation, decision support, and circular resource use to raise efficiency and cut inputs/emissions. Emphasizes interoperability and robust business cases.

Why microfluidics matters:

Microfluidic nutrient dosing & analysis loops for hydroponics/aeroponics;

Lab-on-chip plant phenotyping (phytohormones, nutrient status, pathogens) for

closed-loop control;

 \circ **\mu-reactors** for on-site biostimulant production/conditioning.

*** HORIZON-CL6-2027-01-BIODIV-06 - HEALTH OF ECOSYSTEMS AND WILD SPECIES, PREDICTIONS AND IMPACTS ON HUMAN HEALTH

Type of action: RIA

Budget (M€): 14.00; Expected/project: 7.00; # projects: 2

Scientific focus: Link ecosystem health indicators and stressors to human health via One
 Health surveillance, modelling and early-warning, integrating biodiversity, pathogen dynamics

and exposure pathways.

• Why microfluidics matters: Fieldable microfluidic assays (eDNA/eRNA, vector/pathogen

chips), point-of-use toxin/biomarker sensors, and organ-on-chip models for cross-species risk

assessment.

*** HORIZON-CL6-2026-02-FARM2FORK-02 - TACKLING PESTICIDE RESISTANCE: EARLY DETECTION, MANAGEMENT STRATEGIES, AND FORESIGHT

Type of action: RIA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

• Scientific focus: Build early-warning and surveillance for resistance, develop integrated

management strategies, modelling, and foresight to prevent resistance spread.

Why microfluidics matters: On-chip genotyping of resistance markers, rapid phenotyping of

sensitivity in micro-droplets, and **field-portable sample-to-answer** for advisory systems.



*** HORIZON-CL6-2026-01-ZEROPOLLUTION-03 - DEVELOPING MANAGED AQUIFER RECHARGE

TECHNIQUES (MAR) IN A RURAL CONTEXT

• Type of action: RIA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

• Scientific focus: Develop and demonstrate MAR solutions tailored to rural settings, aligned

with CIS guidance, addressing hydrogeology, water quality, design/operation, monitoring, and

governance.

Why microfluidics matters:

Porous-media chips to study clogging, redox fronts, and biofilm dynamics under MAR

conditions;

o **In-situ micro-sensors** for nutrients, metals, and microbial indicators;

o **On-chip fate/transport assays** for PFAS/CEC attenuation.

*** HORIZON-CL6-2027-01-CIRCBIO-08 - BIOTECHNOLOGY APPLICATION FOR CCU

Type of action: RIA

Budget (M€): 12.00; Expected/project: ~6.00; # projects: 2

Scientific focus: Develop biotechnological CO₂/CO valorization routes (microbial, enzymatic)

with improved yields, productivity, and integrability into industrial ecosystems, including

sustainability and techno-economic assessments.

Why microfluidics matters: Gas-liquid microreactors for mass-transfer-limited CCU, screening

of acetogens/methanotrophs in droplets, and on-chip TEA/LCA data streams via PAT.

** HORIZON-CL6-2026-02-FARM2FORK-01 - DEVELOPING INNOVATIVE PHYTOSANITARY

TREATMENTS FOR REGULATED PLANT PESTS

Type of action: IA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2



> Scientific focus: Pilot novel phytosanitary treatments (efficacy, residue, safety), develop standardized protocols and demonstration in real supply chains, including regulatory

interfaces.

Why microfluidics matters: On-chip exposure chambers for pest/pathogen life-stages, dose-

response mapping at scale, and micro-encapsulation strategies for targeted delivery/reduced

residues.

** HORIZON-CL6-2027-02-FARM2FORK-08 - AI-POWERED FOODOME CHARACTERIZATION

Type of action: IA

• Budget (M€): 8.00; # projects: 1

Scientific focus: Build Al-ready pipelines for foodome (chemical/nutritional/hazard profiles)

across real matrices; integrate high-throughput measurement, data fusion, and validation in

industry settings.

• Why microfluidics matters: Front-end sample prep on chip (cleanup, extraction,

derivatization), μ-scale separations feeding MS/NMR, and inline quality sensors for factory

deployment.

** HORIZON-CL6-2026-02-FARM2FORK-04 - ACCELERATING THE DEVELOPMENT OF BREEDING TOOLS

FOR PERENNIAL CROPS, SPECIFICALLY FRUIT AND NUT TREES

Type of action: RIA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

Scientific focus: Develop and integrate breeding tools (genotyping, phenotyping, speed

breeding) for perennials; address climate resilience, pests, and quality traits with interoperable

data and field validation.

Why microfluidics matters: Single-pollen/seed assays on chip, μ-fluidic phenotyping

(hormone/volatile flux), and ultra-low input genomics to accelerate selection cycles.



Microfluidics

** HORIZON-CL6-2026-02-FARM2FORK-13 - BOOSTING PLANT HEALTH AND REDUCING LOSSES ON

FARM AND DURING STORAGE FOR SUSTAINABLE GROWTH IN AFRICA (FNSSA)

Type of action: IA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

• Scientific focus: Demonstrate practical interventions that reduce field and storage losses in

African contexts (plant health, diagnostics, storage tech, IPM), with capacity-building and local

value-chain integration.

Why microfluidics matters: Portable microfluidic diagnostics for pests/ pathogens/

mycotoxins, low-cost on-chip sensors for storage conditions (humidity, volatiles), and

micro-encapsulated treatments.

** HORIZON-CL6-2027-01-ZEROPOLLUTION-03 - IMPROVE THE CAPACITY TO MONITOR AND REDUCE

AIR POLLUTION FROM AGRICULTURE

Type of action: RIA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

• Scientific focus: Develop and validate monitoring/mitigation strategies for agri-air pollution

(e.g., NH₃, PM, VOCs), linking measurement, modelling, and interventions.

Why microfluidics matters: μ-gas sensors & micro-preconcentrators for NH₃/VOCs,

aerosol-on-chip characterization, and sensor fusion with data models.

** HORIZON-CL6-2027-02-FARM2FORK-01 - INCREASING THE RESILIENCE OF AGRICULTURE IN

WATER- AND NUTRIENT-SCARCE ENVIRONMENTS THROUGH DIGITAL INNOVATIONS

Type of action: RIA

Budget (M€): 12.00; Expected/project: 6.00; # projects: 2

• Scientific focus: Deploy digital sensing/decision tools to manage scarce water/nutrients;

integrate agronomy, remote sensing, and farm-level automation.

Why microfluidics matters: Soil-pore-scale chips to study nutrient transport, sap-flow

micro-sensors, and on-chip nutrient monitoring for precision fertigation.





** HORIZON-CL6-2027-03-GOVERNANCE-04 - ADVANCING OCEAN OBSERVATION: ENHANCING TECHNOLOGIES AND OBSERVING SYSTEMS DESIGN FOR A SUSTAINABLE FUTURE

• Type of action: RIA

• Budget (M€): 15.00; Expected/project: 5.00; # projects: 3

• Scientific focus: Co-design and validate new ocean observing technologies and system architectures, improving coverage, interoperability, and sustainability of observing networks.

Why microfluidics matters: Lab-on-chip nutrient & pH sensors for autonomous platforms,
 biofouling-resistant micro-analysers, and compact micro-samplers.

** HORIZON-CL6-2027-01-BIODIV-01 - INTEGRATING REMOTE SENSING AND IN-SITU OBSERVATIONS
OF BIODIVERSITY, TOWARDS A FULLY INTEROPERABLE OBSERVATION AND DATA FRAMEWORK

Type of action: RIA

Budget (M€): 10.00; Expected/project: 5.00; # projects: 2

Scientific focus: Build interoperable frameworks that connect in-situ biodiversity observations
with RS products, enabling indicators and policy-relevant monitoring.

Why microfluidics matters: microfluidics can supply standardized on-site sampling cartridges
 (eDNA/eRNA/chemistry) that dovetail with RS products and data pipelines.

** HORIZON-CL6-2027-01-BIODIV-02 - TECHNICAL INNOVATION TO PROTECT ECOSYSTEMS AND TO SCALE UP THEIR RESTORATION

Type of action: IA

Budget (M€): 14.00; Expected/project: 7.00; # projects: 2

• Scientific focus: Demonstrate restoration technologies at scale (monitoring, adaptive management, supply-chain tools), with robust ecological and socio-economic KPIs.

 Why microfluidics matters: In-field micro-assays for soil/water health and portable biosensors to steer restoration actions in near-real time.



** HORIZON-CL6-2027-02-CLIMATE-02 - TOWARDS THE WATER INFRASTRUCTURES OF THE FUTURE

- Type of action: RIA
- Budget (M€): 10.00; Expected/project: 5.00; # projects: 2
- Scientific focus: Design and validate resilient water infrastructures, integrating sensor networks, digital twins, and nature-based options for droughts/floods/quality.
- Why microfluidics matters: Networkable micro-analysers for contaminants/nutrients, and lab-on-chip early-warning modules for plant operators.

** HORIZON-CL6-2027-02-CLIMATE-04 - CARBON FARMING INNOVATION AND SCALE-UP

- Type of action: IA
- Budget (M€): 12.00; Expected/project: 6.00; # projects: 2
- Scientific focus: Pilot and scale carbon-farming practices with robust MRV, permanence, and economics.
- Why microfluidics matters: Soil-on-chip microcosms to quantify carbon stabilization processes
 and in-situ microsensors for soil gases and dissolved organics.

** HORIZON-CL6-2027-02-CLIMATE-01-TWO-STAGE - OPEN TOPIC: INNOVATIVE SOLUTION FOR THE WATER RESILIENCE STRATEGY

- Type of action: IA
- Budget (M€): 10.00; Expected/project: 5.00; # projects: 2
- Scientific focus: Open innovation for EU Water Resilience Strategy-deployable tech with measurable resilience gains.
- Why microfluidics matters: Compact treatment/monitoring modules (e.g., PFAS pre-concentration + sensor), micro-scale process intensification for distributed water systems.



Microfluidics Innovation

** HORIZON-CL6-2027-01-ZEROPOLLUTION-01 - REPLACING HAZARDOUS SUBSTANCES IN BIOCIDAL

PRODUCTS

• Type of action: RIA

Budget (M€): 12.00; Expected/project: 4.00; # projects: 3

• Scientific focus: Develop safer, effective alternatives to hazardous actives in biocides; include

mode-of-action evidence and risk/benefit assessments.

Why microfluidics matters: High-content micro-bioassays for efficacy/cytotoxicity,

time-resolved on-chip kinetics, and micro-encapsulation to tune delivery while reducing

exposure.

Calls with 49-45% microfluidic relevance

HORIZON-CL6-2026-02-FARM2FORK-07 - STRENGTHENING THE EU PLANT PROTECTION ECOSYSTEM

FOR A FUTURE-PROOF AGRICULTURE - 49%

Type of action: CSA

Budget (M€): 3.00, # projects: 1

Scientific objectives

o Build a coordinated EU "plant protection ecosystem" spanning research, policy, and

practice.

o Promote cross-border cooperation, training, and harmonized practices to reduce pesticide

use while maintaining yields.

o Strengthen preparedness and response for plant health crises, including surveillance and

risk communication.

Ensure multi-actor participation (authorities, researchers, farmers, SMEs) and portability

across agro-climatic regions.

Why microfluidics could add value

o Rapid on-site diagnostics for pathogen detection in plant tissues, seeds, or irrigation water.

o **Droplet microfluidics** to screen biocontrol agents, phage cocktails, or RNA-based actives

at high throughput.

Microfluidic aerosolization for precisely dosed application prototypes, reducing active

substance use.



 Field-deployable microfluidic sensors to monitor residue, environmental drift, and soil health during trials.

o Interfacing microfluidic data streams with **digital twins** for crop protection strategies.

HORIZON-CL6-2026-01-ZEROPOLLUTION-02 - BIOREMEDIATION OF UKRAINE'S ECOSYSTEMS CONTAMINATED BY CONFLICTS - 49%

• Type of action: IA

• Budget (M€): 12.00; # projects: 2

Scientific objectives

 Deploy biotechnology and nature-based solutions to remediate conflict-induced contamination and restore ecosystem services in Ukraine.

Provide communities and authorities with innovative remediation options aligned with the
 EU's upcoming Life Sciences Strategy and Biotech Act.

o Contribute to **recovery**, **circularity**, and environmental upgrading in war-affected areas.

Why microfluidics could add value

 Microfluidic environmental assays to rapidly profile contaminants (heavy metals, explosives residues, fuels, PFAS) in soil/sediment/water on site.

 High-throughput screening of microbial consortia/enzymes for biodegradation; gradient chips to optimize conditions (pH, nutrients, electron acceptors).

 Micro-bioreactors for scale-down testing of bio-stimulation/augmentation, coupled with real-time sensors.

 Lab-on-chip toxicity panels (algae, daphnia surrogates) supporting risk assessment and treatment validation.

 Portable flow systems to pilot in-situ immobilized enzyme/microbe reactors for groundwater or leachate polishing.

HORIZON-CL6-2026-02-FARM2FORK-01-TWO-STAGE - OPEN TOPIC: IMPROVING THE COMPETITIVENESS OF THE AGRICULTURAL SECTOR BY ENHANCING THE EFFICIENT AND SUSTAINABLE USE OF INPUTS - 49%

• Type of action: IA

Budget (M€): 15.00, Expected/project: 5.00, # projects: 3





Why microfluidics could add value

- o Soil/leaf nutrient micro-assays enabling variable-rate fertilization with less input.
- o Real-time microfluidic nitrate/phosphate sensors for fertigation optimization.
- o **Microreactor** routes to greener adjuvants/formulations improving uptake with lower dose.
- o On-farm **lab-on-chip** analytics to benchmark input efficiency and crop response.
- Embedded microfluidics in irrigation hardware to meter micro-doses with high precision.

HORIZON-CL6-2027-01-BIODIV-08 - ENHANCING THE COMPETITIVENESS OF ORGANIC CROP BREEDING: FOCUS ON INTERCROPPING ADAPTED VARIETIES - 49%

• Type of action: RIA

Budget (M€): 12.00, Expected/project: 6.00, # projects: 2

Scientific objectives

- o Breed and test varieties adapted to intercropping under organic conditions.
- Generate evidence on yield stability, resilience, and product quality in intercrop systems.
- o Provide tools and protocols for variety evaluation and seed sector uptake.
- o Engage value-chain actors to accelerate adoption and market acceptance.

Why microfluidics could add value

- Seed-scale phenotyping (hormone exudates, root metabolomics) using microfluidic chips.
- o Rhizosphere-on-chip devices to study plant-microbe-plant interactions in intercrops.
- High-throughput microfluidic screens for microbial inoculants compatible with organic systems.
- Microfluidic imaging for rapid pathogen detection in organic seed lots.
- Assay miniaturization reduces cost/time in multi-site breeding pipelines.

HORIZON-CL6-2027-01-CIRCBIO-03 - DEVELOPING NOVEL RECYCLING TECHNOLOGIES FOR COMPLEX PLASTIC MATERIALS APPLYING BIOTECH SOLUTIONS - 49%

Type of action: RIA

Budget (M€): 10.00, Expected/project: 5.00, # projects: 2

Scientific objectives





- Advance biotech routes (microbes/enzymes) to recycle multi-material /multilayer/composite plastics.
- o Address hazard and SSbD aspects; propose regulatory assessment updates.
- o Demonstrate at pilot scale with full value-chain participation; include LCA/TEA evidence.

Why microfluidics could add value

- Droplet microfluidics to evolve/screen enzyme libraries for hard-to-depolymerize polymers.
- Micro-bioreactors for kinetics, inhibition mapping, and process intensification at low reagent volumes.
- o **Lab-on-chip analytics** enabling rapid feedback into biocatalyst design.
- o Membrane microreactors for continuous enzymatic depolymerization trials.

HORIZON-CL6-2027-01-CIRCBIO-09 - INCREASING THE CIRCULARITY OF BIO-BASED SECTOR: UPCYCLING AND RECYCLING FOR HIGHER VALUE AND ENVIRONMENTAL BENEFITS - 49%

- Type of action: IA
- Budget (M€): 12.00, Expected/project: 6.00, # projects: 2

Scientific objectives

- Demonstrate upcycling and recycling pathways in bio-based value chains, with robust sustainability and business cases.
- Map and optimize biomass waste flows; create/strengthen at least five platforms connecting suppliers and users.
- Develop digital tools for traceability and a "digital marketplace" for bio-resources; identify regulatory/standardization bottlenecks.

• Why microfluidics could add value

- Micro-assays to characterize heterogeneous bio-waste feedstocks (sugars, inhibitors, metals) rapidly.
- Screening chips for enzymes/microbes to upcycle side-streams (lignin valorization).
- Integrated micro-LCA sensors (COD/BOD chips) in pilots to quantify environmental performance.
- Flow chemistry microreactors to prototype mild conversion routes to higher-value molecules.



Microfluidics

HORIZON-CL6-2027-02-FARM2FORK-02 - ENHANCING KNOWLEDGE ON FEED ADDITIVES WITH **EFFECTS ON GHG MITIGATION AND FEED EFFICIENCY - 49%**

Type of action: RIA

Budget (M€): 12.00, Expected/project: 6.00, # projects: 2

Scientific objectives

Build the science base on feed additives that reduce enteric methane / improve feed

conversion.

o Harmonize measurement protocols, address safety/efficacy and system impacts, and

support regulatory readiness.

Why microfluidics could add value

Rumen-on-chip or micro-fermentation to quantify methane precursors and additive

efficacy at scale.

Microfluidic metabolomics for host-microbiome-additive interactions.

Miniaturized gas-analysis chips for rapid CH₄/CO₂ readout in bench tests.

Formulation microreactors to stabilize actives/encapsulates with controlled release.

HORIZON-CL6-2026-02-FARM2FORK-12 - EXPLORING THE MICROBIOME WORLD TO UNCOVER FOOD

SYSTEMS SOLUTIONS - 49 %

Type of action : CSA

Budget (M€): 2.00, # projects: 1

Scientific objectives

o Coordination action to aggregate and translate R&I knowledge on microbiomes for

sustainable, healthy, and competitive food systems.

Scoping of expected outcomes: market access to microbiome solutions, standardized

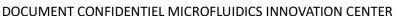
methods for reliable production at scale, and integration with EU policies (Bioeconomy,

Biotech & Biomanufacturing, Food 2030).

Why microfluidics can help

High-flow microfluidic platforms for the screening of microbial consortia (co-cultures,

nutrient/oxygen gradients) and the staging of microbioindustrial processes.





- Parallel micro-bioreactors for formulation optimization, robustness, and industrial reproducibility.
- Data interoperability: standardized output formats (growth trajectories, miniaturized models) useful for "standards & policy" work packages.
- TRL 5-7 demonstrators combining microfluidic sensors and low-cost omic analyses for field pilots (farms, workshops).

HORIZON-CL6-2026-02-FARM2FORK-01-TWO-STAGE - OPEN TOPIC: IMPROVING THE COMPETITIVENESS OF THE AGRICULTURAL SECTOR BY ENHANCING THE EFFICIENT AND SUSTAINABLE USE OF INPUTS

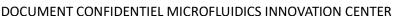
- Type of action: IA.
- Budget (M€): 15.00. Expected/project: ~5.00. # projects: 3.

• Scientific focus:

- Demonstrate, at scale, prototypes of innovations and farming practices that reduce and/or optimise inputs (fertilisers, water, PPP, energy).
- Aim for high TRL (7-8) pilots in real-life operations with multi-actor involvement.
- Include data, digital, and automation elements where useful, and ensure pathways to wide adoption (business models, advisory support).
- Allow financial support to third parties (FSTP) and follow blind evaluation at 1st stage.

• Why microfluidics could fit:

- Lab-on-chip nutrient and pesticide sensors for on-farm, real-time input optimization (fertigation, variable-rate spraying).
- Micro-bioreactors for testing bio-inputs (biostimulants/biocontrols) and enabling dose-response characterization with tiny sample volumes.
- o **Point-of-use water-quality chips** to close loops in irrigation reuse.
- Microfluidics can supply prototype hardware for pilots and help industrialize compact sensing modules.





HORIZON-CL6-2026-02-FARM2FORK-05 - BOOSTING CIRCULARITY AND DIVERSIFICATION STRATEGIES OF TERRESTRIAL LIVESTOCK PRODUCTION SYSTEMS - 48%

• Type of action: RIA

Budget (M€): 13.00, Expected/project: 6.50, # projects: 2

Scientific objectives

- Design and validate circular livestock models (feed/manure nutrient loops, diversification).
- Quantify environmental and socio-economic performance; multi-actor pilots across regions.
- Address logistics, digitalization, and decision support for farm/territorial scales.

• Why microfluidics could add value

- On-farm microfluidic nutrient sensors (ammonium, nitrate, phosphate, VFAs) guiding valorisation.
- o **Micro-AD on-chip** screening to optimize co-digestion recipes.
- o Rapid residue/toxin chips for alternative feeds and side-streams.
- o **Lab-on-chip** health diagnostics supporting resilient, low-input herd management.

HORIZON-CL6-2026-02-FARM2FORK-14 - GREEN TRANSITION FOOD PROCESSING AFRICA - 48%

- Type of action: RIA
- Budget (M€): 10.00, Expected/project: 5.00, # projects: 2

Scientific objectives

- o Accelerate **green processing** innovations in African food chains with EU-AU cooperation.
- o Improve energy/water efficiency, safety, and nutritional quality; build local capacity.

Why microfluidics could add value

- Low-cost lab-on-chip for pathogen and mycotoxin screening in decentralized settings.
- Microreactors for enzymatic processing (e.g., fortification, allergen reduction) with minimal utilities.
- o Point-of-process analytics (pH, sugars, contaminants) enabling leapfrog QC in SMEs.
- o Portable microfluidic water testing to safeguard processing water reuse.



HORIZON-CL6-2026-01-CIRCBIO-03 - ADVANCED RECOVERY OF CRITICAL RAW MATERIALS FROM WASTE FROM ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) - 48%

• Type of action: RIA

Budget (M€): 10.00, Expected/project: 5.00, # projects: 2

Scientific objectives

 $\circ\quad$ Develop and demonstrate advanced processes to identify, separate, and recover critical

raw materials from WEEE streams.

o Improve characterization of mixed, complex WEEE to enable circularity and industrial

uptake.

Why microfluidics could add value

Micro-assays for selective leaching/solvent extraction screening at ppm-ppb levels.

Lab-on-chip analytics for rare-earth/precious-metal speciation inline.

Microreactor crystallization/electrowinning prototypes for high-purity recovery with low

reagents.

 $\circ \quad \text{Sensorised} \quad \textbf{micro-separation} \quad \text{(dielectrophoresis/magnetophoresis)} \quad \text{concepts} \quad \text{for} \quad \text{fine}$

fractions.

HORIZON-CL6-2026-03-GOVERNANCE-05 - COORDINATED EUROPEAN CONTRIBUTION TO WMO GHG WATCH - 45%

Type of action: CSA

Budget (M€): 7.00, # projects: 1

Why microfluidics could add value

o Micro-GC/μ-spectroscopy front-ends for calibration/validation workflows in GHG

observations.

Microfluidic sampling modules improving temporal resolution/portability for in-situ

networks.

o **Chip-level permeation standards** for trace-gas calibration transfer across sites.



HORIZON-CL6-2026-03-GOVERNANCE-08 - BOOSTING DATA AVAILABILITY AND AI SOLUTIONS IN THE FOOD SYSTEM FOR CONSUMERS AND FOOD SERVICES PROFESSIONALS - 45%

- Type of action: IA
- Budget (M€): 15.00, Expected/project: 5.00, # projects: 3
- Why microfluidics could add value
 - o Smart packaging micro-sensors (freshness, spoilage volatiles) feeding AI platforms.
 - o **Point-of-sale micro-assays** for allergens or contaminants enabling safer food services.
 - o In-kitchen microfluidic QA devices generating labelled datasets for AI models.

HORIZON-CL6-2027-02-COMMUNITIES-02 - EMPOWERING LOCAL URBAN FOOD SYSTEMS ENTREPRENEURSHIP AND INNOVATION - 45%

- Type of action: IA
- Budget (M€): 12.00, Expected/project: 6.00, # projects: 2
- Scientific objectives
 - Build local entrepreneurship capacity for urban food systems; pilot innovation infrastructures.
 - Foster multi-actor collaboration and inclusive models; improve sustainability metrics and digital tools.
- Why microfluidics could add value
 - o **Compact food-safety chips** for shared kitchens, incubators, and micro-SMEs.
 - Micro-analytics kits for nutrient/contaminant testing in urban farming (hydroponics/vertical).
 - o Plug-and-play microreactors for small-batch fermentation/value-added processing.

HORIZON-CL6-2027-01-CIRCBIO-07 - IMPROVING BIOMASS FLOWS FOR A SUSTAINABLE AND CIRCULAR BIOECONOMY - 45%

- Type of action: IA
- Budget (M€): 15.00, Expected/project: 7.50, # projects: 2
- Scientific objectives





- Improve/administer biomass monitoring & modelling; estimate supply-demand to 2050.
- Test the feasibility of biomass reporting across ≥10 countries; enable platforms and business models.
- Link with JRC Knowledge Centre for Bioeconomy and relevant initiatives.

Why microfluidics could add value

- Rapid compositional chips for diverse biomass (moisture/sugars/lignin/inhibitors) at collection points.
- o **On-truck micro-assays** enabling quality-based logistics and pricing.
- o Micro-pilot lines to assess valorization options before sending streams to hubs.

HORIZON-CL6-2026-01-CIRCBIO-08 - SUPPORTING PRE-NORMATIVE RESEARCH FOR STANDARDIZATION OF THE BIO-BASED PRODUCTS - 45%

- Type of action: RIA
- Budget (M€): 8.00, Expected/project: 4.00, # projects: 2
- Scientific objectives
 - Generate measurement methods, reference data, and harmonized protocols for bio-based products, feeding standards, and SSbD assessments.
- Why microfluidics could add value
 - Standard-ready micro-assays for biodegradation, migration, and eco-tox endpoints.
 - o Microfluidic reference materials and inter-lab ring-test kits.
 - High-throughput chips characterizing bio-based additives/polymers for standards drafting.

HORIZON-CL6-2027-02-FARM2FORK-05 - ENHANCING FARMERS PROFITABILITY AND RESILIENCE THROUGH INNOVATIONS FOR DIVERSIFIED CROPS AND VALUE CHAINS - 45%

- Type of action: IA
- Budget (M€): 12.00, Expected/project: 6.00, # projects: 2
- Why microfluidics could add value
 - On-farm micro-assays for quality traits enabling new crop contracts (protein, starch, functional fibres).

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- Microreactor demos for niche ingredients (ferments, biocolours, extracts) supporting SME value chains.
- o **Lab-on-chip** safety/quality analytics lowering certification barriers for small producers.

HORIZON-CL6-2027-01-BIODIV-03 - LIVING LABS FOR THE ERADICATION AND/OR MANAGEMENT OF INVASIVE ALIEN SPECIES - 45%

- Type of action: RIA
- Budget (M€): 27.00, Expected/project: 9.00, # projects: 3

Scientific objectives

- Set up ≥3 living labs (10-20 experimental sites each) to co-develop and test IAS prevention/eradication/management.
- Cover multiple ecosystem types; ensure robust monitoring, transferable solutions, and business models.

Why microfluidics could add value

- Environmental DNA (eDNA)-on-chip assays for rapid IAS detection in water/soil.
- o Microfluidic trap sensors (semiochemicals) for surveillance in living labs.
- o **Toxicity/efficacy chips** to down-select eradication tools with minimal non-target impacts.

HORIZON-CL6-2026-01-BIODIV-02 - UNDERSTANDING AND TACKLING THE DECLINE OF INSECTS - 45 %

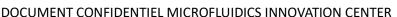
- Type of action : RIA
- Budget (M€): 13.00, Expected/project: 6.50, # projects: 2

Scientific objectives

- Understand the mechanisms of insect decline (multiple pressures), structure surveillance, and test mitigation measures.
- Multi-scale approaches combining -monitoring, ecology, genomics, and modeling to link pressures, population dynamics, and ecosystem impacts.

• Why microfluidics can help

 eDNA/eRNA- onchip- ddPCR microfluidic to detect species/parasites at very low abundance.





- Microtrapping/analysis systems (imaging + inertial sorting) for automated pollinator/pest counting.
- Droplet bioassays (acute/chronic toxicity) for screening mixtures of pollutants and biopesticides.
- Miniature environmental sensors for temperature/humidity/NOx/ozone gradients correlated to local dynamics.

Calls with 44-40% microfluidic relevance

HORIZON-CL6-2026-01-CIRCBIO-09 - BALANCING FOOD SECURITY, BIOECONOMY, CLIMATE AND BIODIVERSITY OBJECTIVES - 40 %

- Type of action: RIA
- Budget (M€): 12.00 Expected/project: 6.00 # projects: 2
- Scientific objectives
 - Develop analytical frameworks and tools to arbitrate between food security,
 bioeconomy objectives, climate, and biodiversity.
 - Integration of multisource data and scripting to guide strategies and policies. -

Microfluidic input

- Screening of bio-based materials (barriers, coatings) at the micro scale to quantify durability/performance (permeation, release).
- Experimental Micro- LCA: microreactor benches to quantify yields/emissions at small scale and feed the arbitrage models.
- Microfluidic sensors (water/air quality) for field data that can be integrated into multiobjective models.





HORIZON-CL6-2026-01-BIODIV-07 - BOOSTING AGROBIODIVERSITY FOR FOOD SECURITY AND SUSTAINABLE COMPETITIVENESS - 40 %

• Type of action : RIA

Budget (M€): 12.00 • Expected/project: 6.00 • # projects: 2

Objectives

- o Increase **agrobiodiversity** for resilience, quality, and competitiveness.
- Follow-up ecosystem services, sol-microbio-material interactions, adoption by sectors.

• Microfluidic input

- Racinaire microbiote on-chip phenotyping (nutrient flow, exudates) to select varieties/associations.
- Rapid diagnostics (plant pathogens, abiotic stress) via portable microfluidic immunoassays.
- o **Screening of bioinputs** (microbial consortia) in multiphase microbioreactors.

HORIZON-CL6-2026-01-CIRCBIO-01 - IMPROVING CIRCULARITY OF MULTILAYER FLEXIBLE PLASTIC FOOD CONTACT PACKAGING - $40\,\%$

- Type of action : IA
- Budget (M€): 12.00 Expected/project: 6.00 # projects: 2
- Objectives: Circulation solutions for multilayer packaging in food contact (separation, recycling, safety, traceability).

• Microfluidic input

- Microreactor for depolymerization-controlled solvolysis and kinetic study on multilayer samples.
- Micro-separations (membranes/electrowetting) for testing delamination- and deinking processes.
- Microchannel migration test cells to assess safety (NIAS, barriers).



HORIZON-CL6-2026-01-BIODIV-02-TWO-STAGE - OPEN TOPIC: UNCOVERING THE CAUSES OF SPECIFIC SPECIES' RAPID DECLINE AND EXPLORING ACTIONABLE SOLUTIONS - 40 %

• Type of action : RIA

Budget (M€): 12.00 • Expected: 3.00 • # projects: 4

Objectives

Open calls **focused on very rapid species decline**: combine observation, diagnosis, experimentation, and operational solutions.

microfluidic input

o eDNA/eRNA on-chip, μimmuno-assays, and μsensors for final monitoring- and

multistress exposure experiments.

Organs- on-chip-/ecotoxicologically embodied to test early life cycle mitigation

measures.

HORIZON-CL6-2027-02-FARM2FORK-06 - UNLEASHING THE POTENTIAL OF SUSTAINABLE SMALL-SCALE AQUATIC FOOD PRODUCTION - 40 %

Type of action : IA

Budget (M€): 12.00 • Expected: 6.00 • # projects: 2

Objectives:

o **Practical solutions for small-scale aquaculture:** technical innovation, business models,

capacity transfer for implementation.

o Address **climate impacts**, ecological footprint, animal welfare, ecosystem services.

Microfluidic input

o Microfluidic sensors (oxygen, ammonium, micropollutants) for basins and RAS

systems.

Pathogenic lab-on-chip (virus/bacteria) for biosafety in hatchery/livestock farming.

• Online management (μfluidic loops + IoT) for water/energy consumption.



HORIZON-CL6-2027-02-FARM2FORK-09 - AFRICAN UNION - EUROPEAN UNION PARTNERSHIP ON FNSSA - 40 %

• Type of action : CSA

Budget: 7.00 • # projects: 1

Objectives

Strategic AU- UE FNSSA coordination: alignment, roadmaps, capacity building, and

innovation deployment.

Microfluidic input

Field kits (water, contaminants, mycotoxins), robust microfluidic/ low-cost adapted

to African contexts.

Technological transfers (miniaturized methods, training) to R&I FNSSA hubs and living

food labs.

HORIZON-CL6-2026-02-FARM2FORK-02-TWO-STAGE - OPEN TOPIC: BOOSTING ORGANIC FARMING FOR A COMPETITIVE, SUSTAINABLE AND RESILIENT FARMING SECTOR - 40 %

Type of action: RIA.

Budget (M€): 12.00. Expected/project: 6.00. # projects: 2.

Scientific focus:

Solutions to increase performance and resilience in organic systems (yields, labor

efficiency, risk).

Weed and pest management alternatives, biodiversity-friendly practices, and

valorization of products (including processing, storage, risk assessment).

Strong knowledge transfer with AKIS/EIP-AGRI; collaboration with Agroecology

Partnership; possible JRC involvement.

• Why microfluidics could fit:

On-farm microbiome/soil health chips to track biological activity supportive of organic

practices.



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- Rapid residue-free diagnostics (e.g., pathogen detection) to underpin non-chemical control decisions.
- Microencapsulation (microfluidic emulsification) of bio-inputs for controlled release and improved shelf-life.
- Provide portable analytical kits for farmer-led trials and living-lab validation.

HORIZON-CL6-2027-02-FARM2FORK-02-TWO-STAGE - OPTIMISING THE WATER-NUTRIENT-ENERGY NEXUS FOR SUSTAINABLE AND CLIMATE SMART AGRICULTURE IN AFRICA (FNSSA) - 40 %

- Type of action: RIA.
- Budget (M€): 15.00. Expected/project: ~5.00. # projects: 3.
- Why Microfluidics could fit:
 - Low-cost field kits for water-quality (nutrients, contaminants) and soil-nutrient sensing to balance the nexus.
 - o **Energy-frugal, battery/solar-powered LoC devices** suitable for rural African contexts.
 - Decentralized diagnostics to support irrigation/fertigation scheduling and reduce losses.



Microfluidics

Calls with 39-35% microfluidic relevance

HORIZON-CL6-2026-01-BIODIV-04 - PUSHING THE FRONTIER OF KNOWLEDGE AND CONSERVATION

ACTION FOR DEEP SEA ECOSYSTEMS - 35 %

Type of action : RIA

Budget (M€): 20.0 • Expected: 10.00 • # projects: 2

Objectives

Mapping bathy/abyssal habitats, deploying imagery, acoustics, genomics, and rapid

taxonomy; establish baselines, spatiotemporal dynamics, and cumulative impacts

(climate, noise, uses).

o Define EOV/EBV, indicators/monitoring approaches, and long-term modeling for

management/mitigation.

Microfluidic input

o Very low volume samples μlabos embarked (eDNA, nutrients) for benthic

platforms/ROV.

Cytometry-on-chip for microplankton and long-term chemical (pH, nutrients) sensors.

HORIZON-CL6-2026-01-CIRCBIO-05 - UNDERSTANDING BIOMASS FLOWS IN EUROPE - 35 %

Type of action: RIA

Budget (M€): 6.00 • Expected: 3.00 • # projects: 2

Objectives

Final mapping of biomass flows (primary/secondary), harmonization of indicators, and

filling in data gaps.

Microfluidic input

Analyses of composition by micro-reactor and µchromatography to calibrate the flow.

Conversion tests (hydrolysis, fermentation) in microfluidic reactors

parameters/emissions.



Microfluidics

HORIZON-CL6-2027-01-CIRCBIO-04 - CAPACITY BUILDING FOR EXTENDING PRODUCT LIFECYCLES THROUGH REPAIR AND REFURBISHMENT - 35 %

• Type of action : RIA

Budget (M€): 10.00 • Expected: 5.00 • # projects: 2

Objectives

Develop solutions/ skills to extend the lifespan (diagnosis, repair, reconditioning) and

deploy in urban/industrial ecosystems.

Microfluidic input

Non-destructive microfluidic tests (sealing, microchannels, exchangers) for rapid

re-qualification of subsystems.

o **Design of fluidic modules** (quick couplings, self-detachable surfaces).

HORIZON-CL6-2027-01-CIRCBIO-06 - TOWARDS A EUROPE OF BIOECONOMY PLACES - 35 %

Type of action: RIA

Budget (M€): 12.00 • Expected: 6.00 • # projects: 2

Objectives

Qualify and network 'Bioeconomy Places' with environmental/social/eco indicators,

increased skills, and investments.

Microfluidic input

Territorial demonstrators (water/air/soil) via microfluidic sensors to objectify the

"places" indicators.

Micro-bioreactor for local valorization of bioresources (agro/urban waste).

HORIZON-CL6-2026-04-GOVERNANCE-01 - ADDITIONAL ACTIVITIES FOR THE EUROPEAN

PARTNERSHIP OF AGRICULTURE OF DATA - 35 %

Type of action: COFUND

Budget (M€): 60.00 (23.00 M€ in 2026 + 37.00 M€ in 2027) • # projects: 1

Objectives

 Co-finance additional activities of the EP «Agriculture of Data», strengthen interoperability of data and services for agriculture/climate/biodiversity.

• Microfluidic input

- Sensor data flows (water/soil/air) from microfluidic platforms to feed the Agriculture
 of Data ecosystem (interoperable).
- Use-cases demonstrating the value of granular micromeasurement for MRV, agroecology, and adaptive management.



Calls with 34-30% microfluidic relevance

 $\hbox{HORIZON-CL6-2026-02-FARM2FORK-03-BOOSTING\ THE\ COMPETITIVENESS\ OF\ PROTEIN\ CROPS\ IN}$

EUROPE - 30 %

• Type of action: IA

• Budget: 12.00 M€ • Expected: 6.00 M€ • # projects: 2

• Objective: strengthen the performance/value chains of protein crops (varieties, practices,

processing), competitiveness, and sustainability.

Microfluidics input: enzymatic screenings and microfluidic fractionation of proteins, online

quality analyses (antinutrients), microbioreactors for texturing/soft procedures.

HORIZON-CL6-2026-02-FARM2FORK-08 - ADVANCING BASIC KNOWLEDGE & TOOLS FOR

SUSTAINABLE MANAGEMENT OF KEY MIGRATORY FISH SPECIES - 30 %

Action: RIA

Budget: 16.00 • Expected: 8.00 • # projects: 2

• Objectives: migration ecology, multifactor pressures, management tools, and corridor

restoration.

Microfluidics input: μlabs eDNA- for species detection, water quality sensor, and bioassay

for sublethal effects.

HORIZON-CL6-2026-03-GOVERNANCE-02 - SOCIAL DRIVERS OF SOCIAL SUSTAINABILITY IN

AGRICULTURE - 30 %

Action: RIA

• Budget: 12.00 • Expected: 6.00 • # projects: 2

• Objectives: understanding the social factors (employment, equity, attractiveness) conditioning

agricultural social sustainability; policy recommendations.

Microfluidics contribution: sensor data (exposure, fluid ergonomics for spraying/doses) as

factual inputs to the analysis of working conditions.



HORIZON-CL6-2026-03-GOVERNANCE-03 - ADVANCING THE UN DECADE OF OCEAN SCIENCE CAPACITY & DELIVERING ON THE OCEAN DECADE - 30 %

• Action: CSA

• Budget: 9.00 • Expected: 3.00 • # projects: 3

• Objectives: capacity, coordination, and dissemination for the Ocean Decade (EU &

international).

Microfluidics Contribution: micro-sensor kits and shareable open hardware protocols for

coastal/civic observatories.

HORIZON-CL6-2026-03-GOVERNANCE-04 - SUPPORTING THE ALL-ATLANTIC OCEAN R&I ALLIANCE -

30 %

Action: CSA

• Budget: 5.00 • # projects: 1

Objectives: AAORIA coordination, infrastructure/data sharing, scientific diplomacy.

• Microfluidics contribution: data repository for sensors and standardized microfluidic modules

for transatlantic networks.

HORIZON-CL6-2026-03-GOVERNANCE-07 - SUPPORTING THE COHERENCE & EFFECTIVENESS OF EU

POLICIES ON AGRI-FOOD & BIOECONOMY THROUGH SCIENCE FOR POLICY - 30 %

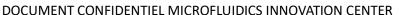
Action: CSA

Budget: 6.00 • # projects: 1

Objectives: science policy-interface, syntheses, support for agribio-economy policies.

Microfluidics contribution: case of sensors/µanalyses for quantitative proofs that can be

integrated into impact evaluations.



HORIZON-CL6-2026-03-GOVERNANCE-09 - MAKING EU DATA FOR BIODIVERSITY, CLIMATE, WATER, FORESTS, SOILS... READILY ACCESSIBLE FOR EVERYDAY DECISION-MAKING - 30 %

• Action: CSA

Budget: 8.00 • Expected: 4.00 • #projects: 2

• Objectives: openness and usability of EU environmental data.

Microfluidics contribution: data flow from microfluidic sensors (FAIR formats) and connectors

to dataspaces.

HORIZON-CL6-2026-03-GOVERNANCE-10 - EVIDENCE-INFORMED POLICYMAKING IN A NATURE POSITIVE ECONOMY - 30 %

• Action: RIA

• Budget: 12.00 • Expected: 6.00 • # projects: 2

• Objectives: methods and evidence for nature-positive policies (indicators, decision-making

tools).

• Microfluidics input: field indicators (water/air/soil quality) via sensors to measure the

costs/benefits of policy options.

HORIZON-CL6-2027-02-CLIMATE-03 - STRENGTHENING EVIDENCE-BASED POLICIES FOR RESILIENCE OF EU AGRICULTURE & FORESTRY AND SUPPLY CHAINS AGAINST CRISES - 30 %

Action: RIA

• Budget: 12.00 • Expected: 6.00 • # projects: 2

• Objectives: multi-risk evidence, analyses (climate, shocks) and measures of resilience of

sectors.

• Microfluidics input: sensor data for early-warning (hydric/thermal stress), try adaptation

practices at microscale.



Microfluidics

HORIZON-CL6-2027-01-BIODIV-04 - ACCELERATING THE TRANSITION TO A NATURE POSITIVE

ECONOMY: INTEGRATING BIODIVERSITY INTO THE PRIVATE SECTOR - 30 %

Action: RIA

Budget: 14.00 • **Expected:** 7.00 • # projects: 2

Objectives: biodiversity metrics, data, incentives, financial and demonstrator mechanisms for

the private sector.

Microfluidics input: measurable indicators via µanalysis kits (water/air/discharge quality)

that can be integrated into reports (TNFD/CSRD).

HORIZON-CL6-2027-01-BIODIV-05 - LIVING LABS DRIVING TRANSFORMATIVE CHANGE VIA

KNOWLEDGE INTEGRATION & INCLUSIVE GOVERNANCE - 30 %

Action: RIA

• Budget: 14.00 • Expected: 7.00 • # projects: 2

• Objectives: multi-stakeholder living environments, knowledge integration and inclusive

governance for transformative changes.

Microfluidics contribution: equipment of microfluidic kits for sampling/measuring, and

reproducible protocols.

HORIZON-CL6-2027-01-ZEROPOLLUTION-02 - DEVELOPING EFFECTIVE AIR-QUALITY PLANNING

STRATEGIES THROUGH INNOVATIVE MULTI-SCALE MODELLING - 30 %

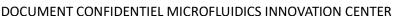
Action: RIA

• Budget: 10.00 • Expected: 5.00 • # projects: 2

• Objectives: QA strategies based on innovative multi-scale modeling and robust data sets.

Microfluidics contribution: networks of microfluidic gas/particle sensors to constrain and

validate the models.



HORIZON-CL6-2027-01-ZEROPOLLUTION-04 - EUROPE-WIDE ENVIRONMENTAL BENCHMARKING SYSTEM OF THE INDUSTRIAL BIOECONOMY SECTORS - 30 %

Action: CSA

• Budget: 3.00 • Expected: 3.00 • # projects: 1

Objectives: pan-European benchmarking framework for industrial bioeconomy sectors.

Microfluidics contribution: microfluidic pilot lines for process benchmarks (yields/emissions)
 and traceable test sets.

HORIZON-CL6-2026-01-BIODIV-01 - SCIENCE-POLICY SUPPORT TO THE IMPLEMENTATION OF EU AND GLOBAL BIODIVERSITY POLICIES AND STRATEGIES - 30 %

Type of action: CSA.

• Budget (M€): 7.50. # projects: 1.

• Scientific focus:

 Provide evidence synthesis, knowledge brokerage, and policy dialogues to implement the EU Biodiversity Strategy 2030 and the Global Biodiversity Framework.

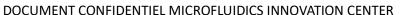
Map policy needs, **consolidate knowledge**, support **IPBES/MEAs**, and build **capacity** across MS/AC to inform **monitoring**, **restoration**, and **protection**.

Why microfluidics could fit:

 Supply technical briefs on the use of eDNA lab-on-chip and field biosensing for biodiversity monitoring.

 Demonstrate standardization pathways (sampling, QA/QC) that could underpin policy indicators.

 Contribute to capacity-building modules (training kits, best-practice protocols) for regulators and observatories.





HORIZON-CL6-2026-01-BIODIV-03-TWO-STAGE - MAINSTREAMING, AND SCALING-UP EVIDENCE-BASED, AND NATURE-BASED SOLUTIONS TOWARDS A NATURE-POSITIVE AND CLIMATE-RESILIENT ECONOMY - 30 %

• Type of action: RIA.

Budget (M€): 21.00. Expected/project: ~7.00. # projects: 3

• Scientific focus:

- Demonstrate and scale NBS that deliver biodiversity, climate adaptation/mitigation,
 and socioeconomic value.
- Build replicable business models, financing schemes, and governance tools for NBS uptake in regions/cities/sectors.
- Generate evidence frameworks and impact metrics to mainstream NBS into infrastructure, land-use, and corporate decision-making.

Why Microfluidics could fit:

- In-situ water/soil quality chips to quantify NBS performance (nutrients, particulates, toxins) at fine spatiotemporal scales.
- o **Portable eDNA assays** to track biodiversity gains from NBS interventions.
- Supply sensor modules for living labs evaluating NBS in real environments.

HORIZON-CL6-2027-01-BIODIV-01-TWO-STAGE - UNLOCKING THE POTENTIAL OF CITIZEN ACTION FOR NATURE PROTECTION AND RESTORATION - 30 %

Type of action: RIA.

Budget (M€): 11.00. Expected/project: ~5.50. # projects: 2

• Why Microfluidics could fit:

- Citizen-science kits (simple microfluidic cassettes/readers) for water quality and eDNA sampling.
- Low-cost consumables and training to underpin robust, standardized data streams from volunteers.



HORIZON-CL6-2026-03-GOVERNANCE-01-TWO-STAGE - OPEN TOPIC: DEVELOP EARTH INTELLIGENCE SOLUTIONS WITH OBSERVATIONS AND STATE-OF-THE-ART AI FOR SUSTAINABLE COMPETITIVENESS AND POLICY MAKING - 30 %

• Type of action: RIA. Budget (M€): 12.00. Expected/project: ~6.00. # projects: 2

• Scientific focus:

o Build an EO Science Service to insert the best EO science into policy; prototype

last-mile policy applications leveraging Copernicus.

o Address policy use-cases (obligations, certification, official statistics, compliance);

contribute to KCEO Roadmap.

Why Microfluidics could fit:

o Provide reference environmental sensor datasets (from microfluidic platforms) that

can ground-truth EO products.

o Contribute open hardware interfaces to data assimilation chains (lab/field

measurements \leftrightarrow EO).

HORIZON-CL6-2027-02-FARM2FORK-04 - IMPROVING UNDERSTANDING OF THE CONTRIBUTION OF ORGANIC FARMING TO SUSTAINABILITY (CSA) - 30 %

• Type of action: CSA.

Budget (M€): 3.00. # projects: 1

Why Microfluidics could fit:

o Contribute evidence reviews and method notes on rapid soil/food analytics to

quantify sustainability outcomes.

Standards contributions for low-cost sensors in monitoring frameworks.



Calls with 29-20% microfluidic relevance

HORIZON-CL6-2026-01-CIRCBIO-06 - BIOECONOMY POLICY SUPPORT HUB FOR MEMBER STATES, REGIONS AND SECTORS - 25 %

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Action: CSA

• Budget: 3.00 • Expected: 3.00 • # projects: 1

• **Objectives: policy hub for** support to States/Regions/Sectors (advice, data, practices).

• Microfluidics contribution: techno-economic and feedback on microfluidic/biobased

processes to shed light on regulation and standardization.

HORIZON-CL6-2026-01-CIRCBIO-10 - BIO-BASED INNOVATION IN SOCIETY: SUPPORTING THE SUSTAINABLE WAY OF LIVING - 25 %

• Action: RIA

• Budget: 12.00 • Expected: 4.00 • # projects: 3

Objectives: societal adoption of biobased innovations (behaviors, design, urban logistics).

• Microfluidics contribution: demonstrators of reusable objects/fluid packaging, proof of use,

and impact measurement (quality/footprint).

HORIZON-CL6-2026-01-BIODIV-05 - ENSURING CONTINUOUS EFFECTIVENESS OF PROTECTED AREA - 25 %

Action: RIA

• Budget: 13.00 • Expected: 6.50 • # projects: 2

• Objectives: continued effectiveness of protected areas in the face of increasing pressures

(monitoring, governance, measures).

• Microfluidics supply: microfluidic field kits for micronutrients/eDNA and quick diagnostics in

isolated areas.





HORIZON-CL6-2027-01-CIRCBIO-01 - ENHANCING ECODESIGN & CIRCULARITY OF CONSUMER ELECTRONICS - 25 %

• Action: IA

Budget: 10.00 • Expected: 5.00 • # projects: 2

• Objectives: ecodesign EEE products (durable, repairable, recyclable).

 Microfluidics contribution: cooling/fluidic management expertise and microchannel integrity tests onboards/assemblies.

HORIZON-CL6-2026-01-CIRCBIO-01-TWO-STAGE - DEPLOYING CIRCULAR SYSTEMicrofluidics SOLUTIONS THROUGH LIVING LABS IN CITIES AND REGIONS (CIRCULAR CITIES AND REGIONS INITIATIVE TOPIC) - 25 %

• Type of action: IA. Budget (M€): 10.00. # projects: 2.

• Why Microfluidics could fit:

 Urban waste valorisation pilots using microreactors (e.g., polymer depolymerisation, bioprocess intensification).

o **Embedded sorting/quality-control** chips in circular manufacturing lines.

HORIZON-CL6-2026-02-COMMUNITIES-01 - BOOSTING SUSTAINABLE COMPETITIVENESS IN RURAL AREAS THROUGH INNOVATION - 25 %

• Type of action: RIA. Budget (M€): 12.00. # projects: 2.

• Scientific focus:

 Diversify rural economies via place-based innovation, strengthen local value chains, and support entrepreneurship.

 Tackle skills, digitalisation, services, and ecosystem building; ensure replication across rural territories.

• Why Microfluidics could fit:

Local micro-manufacturing of compact analytical devices as rural SME opportunity.



> Agri-food testing kits (milk quality, contaminants) enabling distributed labs and new services in rural areas.

HORIZON-CL6-2027-01-CIRCBIO-01-TWO-STAGE - DEPLOYING CIRCULAR SYSTEMicrofluidics SOLUTIONS THROUGH LIVING LABS IN CITIES AND REGIONS (CIRCULAR CITIES AND REGIONS INITIATIVE TOPIC) - 25 %

- Type of action: IA. Budget (M€): 10.00. Expected/project: ~5.00. # projects: 2.
- Why Microfluidics could fit:
 - Modular micro-processing units for local circular manufacturing; QC micro-assays for recycled feedstocks.

HORIZON-CL6-2027-02-COMMUNITIES-01 - STRENGTHENING RURAL COMMUNITIES' RESILIENCE TO SHOCKS - 25 %

- Type of action: RIA. Budget (M€): 12.00. Expected/project: ~6.00. # projects: 2.
- Why Microfluidics could fit:
 - Decentralised testing (water/food/environment) to increase preparedness and response capacity in rural areas.

HORIZON-CL6-2026-01-CIRCBIO-04 - COLLECTION AND SORTING OF TEXTILES FOR REUSE, REPAIR & DIRECT RECYCLING AT CITY/REGIONAL LEVEL - 20 %

- Action: IA
- Budget: 10.00 Expected: 5.00 # projects: 2
- Objectives: territorial systems for direct collection/sorting/repair and recycling of textiles.
- Microfluidics contribution: micro-separation (fibers/plasticizers/dyes) and microchannel release tests to validate processes.



HORIZON-CL6-2026-01-BIODIV-06 - ADVANCING INTEGRATED SCENARIOS & PREDICTION MODELS FOR TRANSITION TO A NATURE-POSITIVE SOCIETY - 20 %

Action: RIA

Budget: 10.00 • Expected: 5.00 • # projects: 2

• Objectives: integrated scenarios and predictive models for nature-positive trajectories.

• Microfluidics input: provide high-resolution soil data (water/soil/air) to calibrate/validate

models.

HORIZON-CL6-2026-02-CLIMATE-01 - TOWARDS EFFECTIVE, FAIR & COHERENT POLICIES FOR CLIMATE MITIGATION/ADAPTATION IN AGRICULTURE & FORESTRY - 20 %

• Action: RIA, Budget: 8.00

 Objectives: analyses/policy for more effective and equitable climate action in agriculture/forestry.

 Microfluidics input: measurement benchmarks (GHG flows, agro-emitters) via minichambers to flux-microfluidic sensors.

HORIZON-CL6-2027-02-CLIMATE-01 - GOVERNANCE, SUSTAINABLE DEVELOPMENT &

• Action: RIA

• Budget: 16.00 • Expected: 8.00 • # projects: 2

INTERNATIONAL POLITICS OF A FUTURE ICE-FREE ARCTIC - 20 %

• Objectives: governance & politics of an ice-free Arctic; implications for the EU and partners.

 Microfluidics contribution: microfluidic sensors resistant to cold for observation and time series useful for governance aspects.





HORIZON-CL6-2027-02-CLIMATE-05 - ADVANCED KNOWLEDGE OF ANTARCTIC ECOSYSTEMS & CONSEQUENCES ON MARINE CARBON CYCLE - 20 %

• Action: RIA

• Budget: 24.00 • Expected: 12.00 • # projects: 2

• **Objectives**: functioning of **Antarctic ecosystems** and marine carbon cycle.

• Microfluidics input: µsensors and autonomous samplers for cold seas.

HORIZON-CL6-2026-02-FARM2FORK-09 - SUSTAINABLE & HEALTHY DIETS FOR CVD PREVENTION WITH DIGITAL APPLICATIONS - 20 %

Action: RIA

• Budget: 12.00 • Expected: 6.00 • # projects: 2

 Objectives: digital applications and nutrition for cardiovascular prevention (behaviors, monitoring).

 Microfluidics contribution: microfluidic patches (sweat) and non-invasive biosensors coupled with health nutrition apps.

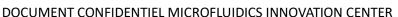
HORIZON-CL6-2027-01-CIRCBIO-02 - ENHANCING ECODESIGN & CIRCULARITY OF CONSTRUCTION PRODUCTS - 20 %

Action: IA

• Budget: 10.00 • Expected: 5.00 • # projects: 2

• **Objectives:** ecodesign and circularity of construction **products** (materials, disassembly).

 Microfluidics contribution: permeation/transport measurements in porous materials using microfluidics, leak-tightness NDT controls.



HORIZON-CL6-2027-01-BIODIV-07 - FOSTERING COMMON FARMLAND BIRDS & MAMMALS FOR RESILIENT FOOD PRODUCTION SYSTEMS - 20 %

Action: RIA

Budget: 12.00 • Expected: 6.00 • # projects: 2

Objectives: agricultural practices favorably suited to lowland birds/mammals (ecosystem services).

 Microfluidics input: sensors (water/air) coupled with biological observations and eDNA kits for species monitoring.

HORIZON-CL6-2026-01-CIRCBIO-02 - ADVANCING RECYCLING TECHNOLOGIES FOR MIXED POST-CONSUMER TEXTILES WASTE FROM BLENDED PRODUCTS - 20 %

• Type of action: IA. Budget (M€): 12.00. Expected/project: 6.00. # projects: 2.

Why Microfluidics could fit:

 Microreactors for polymer solvolysis/enzymatic depolymerization screening and process intensification.

Microfluidic sorting/identification of fibre blends via rapid solvent/thermal micro-tests to steer closed-loop flows.

HORIZON-CL6-2026-01-CIRCBIO-02-TWO-STAGE - OPEN TOPIC: USING THE CIRCULAR CITIES AND REGIONS INITIATIVE TO STRENGTHEN URBAN MANUFACTURING IN SUPPORT OF THE CLEAN INDUSTRIAL DEAL - 20 %

Type of action: IA. Budget (M€): 20.00. Expected/project: 6.00-8.00. # projects: 3.

• Why Microfluidics could fit:

 Urban micro-factories for chemical/bioprocessing in compact, safe reactors; QC at line-speed with micro-assays.





HORIZON-CL6-2026-03-GOVERNANCE-06 - A SERVICES & BUSINESS INCUBATOR FOR GEOSPATIAL OPEN-SOURCE DEVELOPMENTS - 20 %

• Type of action: CSA. Budget (M€): 6.50. # projects: 1.

• Scientific focus:

- Establish a single-entry hub to incubate geospatial open-source (GDAL, QGIS, Pangeo, etc.), strengthen software sovereignty and business models.
- Provide market analysis, mentoring, governance/licensing guidance, and cascading funding to OS projects.

• Why Microfluidics could fit:

- Contribute open hardware + geospatial pipelines (sensor → map) from field devices to open EO stacks.
- o Participate as an **industrial mentor** for open hardware + software sustainability.

HORIZON-CL6-2027-01-CIRCBIO-02-TWO-STAGE - OPEN TOPIC: USING THE CIRCULAR CITIES AND REGIONS INITIATIVE TO STRENGTHEN URBAN MANUFACTURING IN SUPPORT OF THE CLEAN INDUSTRIAL DEAL - 20 %

- Type of action: IA. Budget (M€): 20.00. Expected/project: 6.00-8.00. # projects: 3.
- Why Microfluidics could fit:
 - Similar to 2026 counterpart: compact circular processing modules and in-line micro-assays for urban manufacturing.

HORIZON-CL6-2027-01-CIRCBIO-05 - INNOVATIVE CIRCULAR SOLUTIONS FOR END-OF-LIFE FOOTWEAR THROUGH COLLECTION, SORTING AND RECYCLING - 20 %

• Type of action: RIA. Budget (M€): 10.00. Expected/project: 5.00. # projects: 2.

• Scientific focus:

 Develop collection/sorting systems and recycling technologies tailored to footwear compositions; generate quality feedstocks and business cases.





Why Microfluidics could fit:

- Rapid material ID chips (polymer/plasticizer/filler) to classify footwear fractions.
- Microreactor screening for depolymerization/solvent systems; sensorised QA for recycled outputs.

HORIZON-CL6-2026-01-ZEROPOLLUTION-01 - TOWARD A COMPREHENSIVE ASSESSMENT OF THE DISTURBANCE OF MARINE ECOSYSTEMS BY ANTHROPOGENIC UNDERWATER NOISE - 10 %

- Type of action: RIA. Budget (M€): 10.00. # projects: 1.
- Why Microfluidics could fit:
 - Niche: acoustofluidic biosensors to study noise-induced stress at micro-organism level; micro-sampling for biochemical markers.

HORIZON-CL6-2026-03-GOVERNANCE-01 - ADDITIONAL ACTIVITIES FOR THE SUSTAINABLE BLUE ECONOMY PARTNERSHIP (SBEP) - 10 %

- Type of action: COFUND. Budget (M€): 22.00 (2026) + 16.00 (2027). # projects: 1.
- Why Microfluidics could fit:
 - Peripheral: contributions via marine sensing modules to downstream SBEP-funded calls, not the cofund action itself.

HORIZON-CL6-2027-01-CIRCBIO-10 - STRENGTHENING FOREST RESEARCH FOR THE SUPPORT OF UKRAINE - 10 %

- Type of action: RIA. Budget (M€): 6.00. # projects: 1.
- Why Microfluidics could fit:
 - On-site pathogen detection (forest pests, xylem pathogens) via portable LoC, useful for rapid surveillance and resilience.



HORIZON-CL6-2026-02-FARM2FORK-10 - SUSTAINABLE AND HEALTHY DIETS BASED ON HEALTH STATUS AND SOCIO-ECONOMicrofluidics RISK FACTORS OF AGEING POPULATION (CSA) - 10 %

- Type of action: CSA. Budget (M€): 2.00. # projects: 1.
- Scientific focus:
 - Develop dietary recommendations, prevention campaigns, and post-recovery programmes for older people; guide to MS/AC institutions.
- Why Microfluidics could fit:
 - Limited: contribute rapid nutrient/biomarker test know-how to evidence-gathering;
 not R&D-heavy for MIC.