

Korea-EU Horizon Europe Researchers Consulting Forum

on Cluster 3 & Cluster 6



30 June – 1 July 2026



Thon Hotel EU,
Rue de la Loi 75, 1040 Bruxelles

C3

Cluster 3

Civil Security for Society

Cybersecurity

Critical Infrastructure

Disaster Resilience

C6

Cluster 6

Food, Bioeconomy, Natural
Resources & Environment

Sustainable Agriculture

Biodiversity

Circular Bioeconomy

Korea-EU Horizon Europe Researchers Consulting Forum

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AGENDA

TUESDAY, 30 JUNE

Time	Program	
12:00-13:00	Registration & Networking Lunch	
13:00-14:30	Opening Plenary Session & Policy Session	
	- Opening Remarks (Dae Myung Lee, Director-General, KERC)	
	- Welcome Remarks (Do Hun Kwon, CL3 NCP, UNIST / Kisung Ko, CL6 NCP, Chung-Ang Univ.)	
	- Introduction to KERC (Heewon Shim, Head of Secretariat, KERC)	
	- Horizon Europe CL3 Policy Priorities (Filippo Giacinti, Policy Officer, DG HOME)	
	- Horizon Europe CL6 Policy Priorities (Marco Citelli, Policy Officer, DG RTD)	
14:30-15:00	Break	
Time	Cluster 3 (Room Germany)	Cluster 6 (Room Italy)
15:00-16:30	Pitch Session	Pitch Session
16:30-17:00	Break	
Time	Cluster 3 (Room Germany)	Cluster 6 (Room Italy)
17:00-18:30	Consortium Session I	Consortium Session I
18:30-20:30	Networking Dinner	

WEDNESDAY, 1 JULY

Time	Cluster 3 (Room Germany)	Cluster 6 (Room Netherlands)
09:00-10:30	Open Consulting Session	Open Consulting Session
10:30-11:00	Break	
Time	Cluster 3 (Room Germany)	Cluster 6 (Room Netherlands)
11:00-12:30	Consortium Session II	Consortium Session II
12:30-13:00	Closing	Closing
13:00-14:00	Networking Lunch	
Time	Cluster 3 (Room Germany)	Cluster 6 (Room Netherlands)
14:00-15:00	Individual Group Consulting Session	Individual Group Consulting Session

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CONSULTANTS

Cluster 3



Irene Carrion Alvarez

Innovation Expert, Chief Grants Officer
and Head of EU Projects Dept. at FundingBox

Bachelor in Political Science and Master's degree in International Relations and Corporate Social Responsibility. More than 15 years of experience in project design and management. Began her career at Fundacion CEDDET managing e-learning and blended learning activities funded by the World Bank and Spanish International Cooperation Agency for public service experts from Latin America. Later worked as grants consultant for innovation and research projects across consultancy firms and public/non-profit research institutes, specialising in IT projects, social innovation, business incubation, and public-private partnerships in Europe and Latin America. Since 2018 she has worked as Innovation Expert at FundingBox and since 2020 as Head of EU Projects Department.



Valentin Polo

Senior Innovation Consultant / Team Leader
Aerospace, Security & Defence at PNO Innovation Spain

Holds an MSc and PhD in Electrical Engineering (Photonics) from Universidad Politecnica de Valencia. With more than 25 years of experience in R&D+i activities and EU project proposal preparation across advanced materials, digital technologies, photonics, AI/ML, XR/VR, and applications to SATCOM, automotive, health, circular economy, telecom, defence, and security. Has coordinated 9 EU projects, acts as external reviewer for the European Commission, and has published more than 130 scientific papers and conference contributions.

Cluster 6



Mayte Carracedo

Co-Founder and Chief of Ecosystems
and Impact at FundingBox

Degree in Political Sciences and International Studies from the University of Santiago de Compostela; Master in European Policies from ULB (Belgium); MBA from EAE (Spain). Over 20 years of experience in public funding for innovation, with a strong focus on digital transformation, smart manufacturing, and ecosystem-building projects. Expert in Digital Innovation Hubs, currently focused on building the FundingBox ecosystem around deep-tech stakeholders in Europe.



Kim Schierke

Head of Central Systems and Bid Management
at Schuman Associates

Brussels-based EU funding and public affairs consultancy leader. Supports organisations in identifying, positioning for, and applying to EU funding opportunities, with particular expertise in Horizon Europe and the Connecting Europe Facility. Leads the Central Systems and Bid Management practice, supporting clients throughout the full EU funding application cycle: monitoring opportunities, assessing strategic fit, structuring project concepts, coordinating consortium inputs, developing proposal methodologies, and ensuring alignment with EU programme requirements.

Korea-EU Horizon Europe Researchers Consulting Forum
on Cluster 3 & Cluster 6

Invited Participants



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

Full Name (English)

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Your Target Calls/Topics

HORIZON-CL3-2026-01-DRS-01 Designing new ways of risk awareness and enhanced disaster preparedness.

Your expected contribution to the project/consortium

Objectives: Designing new ways of CBRN(Chemical, Biological, Radiation and Nuclear weapons related) risk awareness and enhanced rapid disaster response and training system as global preparedness against CBRN disaster

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Biography (200~300 words)

1. The relevance to the selected Cluster 3 topic: CBRN(Chemical, Biological, Radiation and Nuclear weapons related) is the one of the most dangerous risk and should build-up the global harmonized standard procedures ,
2. Research concept: simulation and AI based rapid response against the CBRN risk,
3. Expertise: I am a general user license holding veterinary toxicologist(strategic response developments for the CBRN using radiation & RI using lab/facility level simulation)

I got the PhD on the major of veterinary toxicology and pharmacology in 2002 from the college of veterinary medicine, Chungnam National University. And I have working with radiation and radioisotope from 1999 for the development of radiopharmaceuticals about 30 years and I got the general license for radioisotope using in 2002. I have about 4 and half years postdoctoral trainin at Clinical center of NIH in USA from 2004 to 2008. From Dec 2008 upto now, I work at Korea Atomic Energy Research Institute as

Principal Researcher. To develop the advanced protective methodologies for CBRN(Chemical, Biological, Radiological, Nuclear, Explosives) environments we can serve the lab-scale simulation using radioisotope working facility as well as irradiation under the national radiation protection regulation. Also we can serve the evaluation of the safety and efficiency of smart protective equipment for RN disaster responders

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4. International collaboration experience: I have involved in several international collaborative projects such as IAEA CRPs,
5. Expected outcomes: Global standard for the smart response against the CBRN disasters

Research Area / Interests (+-10 lines)

1. Main research field: Radiation and radioisotope applying preclinical studies; 2. Technological specialization: based on KAERI/ARTI's a variety radiation and radioisotope adapted research facilities simulations for the nuclear & radiation disaster in the lab-scales under radiation safety guidelines; 3. research experiences: have performed and ongoing 3 IAEA Coordinated Research Projects as well as several Korean government research projects; and currently proposing the establishment of a rapid response system against nuclear & weapons of mass destruction disasters

Existing/Potential Partner(s)

-existing collaboration networks: researchers of STUK and University of Helsinki of Finland, IAEA groups

Motivation, Expectation and Plan

To expand the collaboration networks and consortium building

Objectives of proposal: Designing new ways of CBRN (Chemical, Biological, Radiation and Nuclear weapons related) risk awareness and enhanced rapid disaster response and training system as global preparedness against CBRN disaster,

-partner search needs: European organization which have a R&D regarding CBRN responses and preparedness



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

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Organization SUNY Korea

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Your Target Calls/Topics

HORIZON-CL3-2026-01-INFRA-03

Cluster 3 Topic Title: Targeted innovative capabilities for the resilience of critical entities to natural and human-induced disasters, including hybrid scenarios

Your expected contribution to the project/consortium

This research has been also partially supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (MSIT), (Analysis of Logical Social Dependencies and Resilience of Social Infrastructure), in which I have been participating as a advisory committee, collaborating with faculty members, postdoctoral researchers, and graduate students across participating universities on coauthored work. This research focuses on how to make current infrastructure systems more resilient. Specifically, it analyzes legal and regulatory arrangements governing infrastructure management to proactively identify vulnerable areas (weak ties and loopholes) susceptible to complex disasters and risks, with the ultimate goal of strengthening and reinforcing public infrastructure systems (Logical, institutional interdependence analysis). We are conducting this research in collaboration with other universities in Korea and Purdue University in the United States. In addition, we are currently engaged in various other international collaborative research projects. Through these efforts, our goal is to make infrastructure in both Europe and South Korea more resilient and sustainable.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research
TRL 4-6: Development / proof of concept / laboratory testing Transporte
TRL 7-9: Pilot scale / demonstration / depolyment

Biography (200~300 words)

Dr. Changdeok Gim is Assistant Professor in the Department of Technology and Society at SUNY Korea. Before joining SUNY Korea in 2024, he served as Associate Director of Water UCI at the University of California, Irvine, where he worked on collaborative research projects in water resource governance, climate adaptation, equity and water industry, water quality issues, PFAS, and digitized water management. He previously worked on projects on mainstreaming climate adaptation, adaptation monitoring and evaluation, and climate adaptation technology law

and policy at the Korea Environment Institute and the Korea Environmental Industry & Technology Institute, engaging in environmental law, infrastructure management, water policy, and regulatory reform. He received a Ph.D. in Human and Social Dimensions of Science and Technology from Arizona State University, where his dissertation focused on institutional management for infrastructure resilience. He also earned an LL.M. (Master Degree) specialized in the American Law Program from the University of California, Irvine School of Law, building on earlier graduate training in urban planning and environmental management from Seoul National University and undergraduate training in law at Seoul National University. His academic and professional background reflects a sustained interdisciplinary trajectory across environmental policy, science and technology studies, resilience studies, AI governance, and legal-institutional analysis. He enthusiastically seeks to build on a collaborative research network with European Universities through the EU-Horizon grant.

Research Area / Interests (+10 lines)

My research examines the institutional and sociotechnical dimensions of infrastructure resilience, environmental governance, and risk, focusing on how interdependent water, energy, fire, and transportation systems fail when the institutions governing them interact in unanticipated ways. Its distinctive contribution is a law-and-systems toolkit that makes these interdependencies visible, combining Institutional Grammar (ABDICO) coding of regulatory texts with network analysis, adapted AcciMap, and STAMP/STPA to show how institutional mandates can collectively produce systemic failure, a dynamic I have theorized. Grounded in dual training in environmental law and science and technology studies, this work has been applied to cases such as the Hebei Spirit oil spill, the Osong underpass disaster, and the Palisades wildfire, and is reflected in Q1 publications in *Systems* (social-interdisciplinary, 2026), five manuscripts under revision and review (2026), *Regulatory Scheme Analysis of Water Quality in the US* (2024), *Mainstreaming of Climate Adaptation* (2023), *Current Opinion in Environmental Sustainability* (2022), and *Environmental Science and Policy* (2019), supported by funding from the US NSF, the Korea National Research Foundation, and the Cyrus-Tang Foundation (US, Las Vegas) (US 1.3 million dollars).

Existing/Potential Partner(s)

There are currently no European researchers with whom I am actively collaborating. However, two researchers appear to be particularly closely aligned with my research interests.

My research focuses primarily on **embedding laws and regulations into Digital Twins to support more resilient cities and participatory decision-making** (e.g., <https://www.diplomacy.edu/blog/part-7-converging-realities/>). I would like to further develop research on **legal and institutional Digital Twins**.

In particular, I would be very interested in meeting and collaborating with:

1. **Marco Pistore** (University of Bologna, Italy), author of *Towards Civic Digital Twins: Co-Designing the Citizen-Centric Future of Bologna*. His work closely relates to my interests in civic and participatory Digital Twins. <https://arxiv.org/search/cs?searchtype=author&query=Pistore,+M>
2. **Amineh Ghorbani** (Faculty of Technology, Policy and Management, TU Delft, Netherlands), whose research on **Institutional Grammar** is highly relevant to my work. I would welcome an opportunity to explore potential collaboration with her.

Motivation, Expectation and Plan

One of the main reasons I would like to participate in Horizon Europe networking and matchmaking events is that direct outreach to individual European researchers often results in limited engagement. Given the generally cautious and conservative nature of academic networking in Europe, unsolicited approaches frequently receive little response or no response at all.

For example, I have already published my research profile, expertise, and career background on the EU Horizon networking platform, but I have not received any direct contact or collaboration inquiries through this channel.

I believe that researcher exchanges and networking opportunities facilitated through official governmental or institutional frameworks, particularly those supported by the Korean government, can significantly enhance the credibility and visibility of my research. Such institutional backing can also help establish trust more quickly among potential European partners and create a more effective environment for meaningful scientific dialogue and long-term collaboration.

Therefore, participation in Horizon Europe-related events would provide a valuable opportunity to build reliable research networks, identify suitable collaborators, and develop future joint research projects between Korea and Europe.



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

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Your Target Calls/Topics

HORIZON-CL3-2026-02-CS-ECCC-02 Enhancing the Security, Privacy and Robustness of AI Models and Systems (SecureAI), HORIZON-CL3-2026-02-CS-ECCC-01 Approaches and tools for security in software and hardware development and assessment

Your expected contribution to the project/consortium

1. Research strategy overview:
 - Development of Vulnerability Analysis and Robustness Enhancement Tools for Next-Generation AI Systems
2. Our team's contribution (expected) to the project:
 - To identify emerging security threats within the state-of-the-art AI architectures -- such as Multimodal Learning and Neuromorphic Learning (Spiking Neural Networks, SNNs) - To provide frameworks for their diagnosis and defense
3. Our specific research approach:
 - (1) Identification of New Attack Surfaces and Proposing Vulnerability Assessment Methodologies for Next-Generation AI Models
 - Compensation Pathway Threat Analysis: We identify the 'internal compensation module,' which restores missing data in multimodal models, as a new attack surface. We provide diagnostic tools for attacks targeting this pathway.
 - Availability Backdoor Threat Modeling: We investigate availability backdoor attack scenarios in SNNbased object detection models that preserve nominal accuracy while deliberately delaying execution time.
 - (2) Development of Security Tools from a Hardware-Software Co-design Perspective
 - Edge Resource Exhaustion Detection and Defense: We develop technology to detect availability threats by monitoring CPU utilization and the reduction of scheduling slack in real-time during AI model execution on edge devices (e.g., NVIDIA Jetson). This directly contributes to software/hardware supply chain security and the development of system assessment tools.
 - Anomaly Detection Based on SNN Firing Dynamics: By tracking abnormal neuron firing patterns (burst spikes) within SNNs, we analyze how adversarially generated event streams escalate hardware load.
 - (3) Robust AI System Design and Security Enhancement Strategies

- Compensation Pathway-Specific Adversarial Training: We enhance the fundamental robustness of AI models against external attacks by applying adversarial training techniques that enforce consistency between clean and adversarial representations.
- Cross-modal Agreement Monitoring: We design a runtime security architecture that detects discrepancies between observed data and internally compensated data. This system provides real-time blocking to prevent internal representations from being manipulated in specific semantic directions intended by an attacker.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research

TRL 4-6: Development / proof of concept / laboratory

Biography (200~300 words)

1. Brief introduction (Dr. Eun-Kyu Lee)

- A professor in the Dept. of Information and Telecommunication Eng. at Incheon National University (INU), South Korea
- Ph.D. in Computer Science from UCLA in 2014 - Experience in industry:
- A principal research engineer at Symantec Research Lab, USA (2014-2015)
- A researcher at Electronics and Telecommunications Research Institute (ETRI), Korea (2002-2008)

2. Research project experience

- Leading cyber security research projects over 25 years
- Application domains: Connected autonomous vehicles (CAV), smart energy systems, and future LEO (low Earth orbit) satellites
- Core research expertise: secure collaborations in networked systems and at a secure AI for neuromorphic systems
- Publications: Over 90 papers in top conferences and journals (say, IEEE/IFIP International Conference on Dependable Systems and Networks and IEEE Transactions on Mobile Computing)
- Award: He earned the most cited paper award in 2014 from the IEEE IoT Initiative (for his work of "Internet of Vehicles: From Intelligent Grid to Autonomous Cars and Vehicular Clouds" proposing a distributed computing model for future connected vehicles)

3. International collaborations

- Dr. Lee has established strong international collaboration partnerships over the world, especially in Asia and North America.
- Two recent international collaborations:
 - (i) One was with Pacific Northwest National Laboratory (PNNL), one of the US Department of Energy national laboratories, where he developed a secured edge system architecture for a smart energy campus.
 - (ii) The other was about resilient hybrid technologies for microgrids with EU collaborators (Imperial College London and University of Oxford), where he was responsible for secure data processing and communications. This was an International Collaborative Energy Research Program, not a Horizon project.

Now we seek to bring his unique expertise to European collaborative consortia, contributing to the codesign of resilient, secure, and trustworthy AI ecosystems.

Research Area / Interests (+-10 lines)

1. Main Research Fields:

- (1) Neuromorphic (SNN) & Edge Security: Evaluating availability threats and backdoor elimination for Spiking Neural Networks (SNNs) in resource-constrained environments
- (2) Structural Robustness of Multimodal AI: Analyzing and securing the internal pathways of missingmodality-robust models

(3) Secure Collaborative Perception (V2X): Developing trust-based consensus and selection mechanisms for autonomous vehicular networks

2. Technological Uniqueness:

- Availability Backdoor & Resource Integrity: We identified the "Event Burst Trigger (EBT)" that exploits the $O(N^2)$ algorithmic complexity of NMS in SNN detectors, inflating latency by 38x while maintaining detection accuracy — a threat invisible to accuracy-centric monitoring.
- Internal Pathway Hijacking Analysis: Unlike conventional input-noise defense, we pioneer research on "Compensation Hijacking," where an attacker manipulates the internal representation of missing modalities by only perturbing observed inputs.
- Dynamic Ego-Agent Security: Our "EgoLoc" framework prevents privilege hijacking in collaborative perception by replacing fixed ID-based selection with communication-efficiency and trust-validation scores.

3. Latest Publications & Awards

- Recent flagship results published in top-tier security and systems venues: DSN (EBT, EgoLoc), ICDCS (AutoGranularity), ESORICS (Compensation Hijacking, under review)
- Awarded the "Most Cited Paper Award" by the IEEE IoT Initiative for foundational work on Internet-of-Vehicles distributed computing

Existing/Potential Partner(s)

1. Current Status:

- Actively seeking to establish new strategic networks and join a multidisciplinary consortium for the Horizon Europe calls.
- Currently, there are no fixed prior collaborations for this specific topic, providing high flexibility for integration into new consortium structures.

2. Target Partner Profiles:

- Open to collaboration with any EU-based academic institutions, research organizations (RTOs), SMEs, or industrial partners whose research vision aligns with Trustworthy AI and Structural Model Security.
- We are looking for partners who require specialized expertise in Adversarial Robustness Testing and AI Availability Defense for their systems.

3. Research Domains for Application:

- Highly focused on fundamental cybersecurity challenges (e.g., Compensation Hijacking, Backdoor Elimination),
- Also interested in applying our security technologies to diverse domains including: Connected and Autonomous Vehicles (CAVs), Space AI, Healthcare & Medical AI, Edge intelligence

Motivation, Expectation and Plan

1. Motivation:

- To co-develop 'Trustworthy AI' technologies that strictly align with the European AI Act and the Cyber Resilience Act (CRA) by ensuring the security, privacy, and robustness of AI models.
- To contribute our specialized expertise in Compensation Hijacking and SNN-based availability threat analysis to reinforce the EU's collective ability to detect and mitigate adversarial manipulations.

2. Expectation:

- To identify and network with potential partners who share our research vision regarding the structural vulnerabilities of AI architectures.
- To successfully form or join a multidisciplinary consortium capable of addressing the specific challenges of the SecureAI (CS-ECCC-02) and/or CS-ECCC-01 calls.

3. Plan:

- Joint Proposal Submission: Collaborate with consortium partners to prepare and submit a highquality proposal for the 2026 HORIZON-CL3 calls.

- Technical Exchange: Facilitate mutual knowledge transfer through laboratory visits and joint technical workshops.
- Strategic Partnership: Establish long-term strategic alliances and formalize cooperation through the signing of Memorandums of Understanding (MoUs) to ensure sustainable research collaboration beyond the project period.



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

Full Name (English)	Seung Joon YANG
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Your Target Calls/Topics

HORIZON-CL3-2026-02-CS-ECCC-02 Enhancing the Security, Privacy and Robustness of AI Models and Systems (SecureAI)

Your expected contribution to the project/consortium

Our expected contribution to the SecureAI consortium is to provide expertise in reliable and resilient AI systems for autonomous manufacturing, robotics, and safety-critical industrial environments.

Our proposed research approach focuses on developing secure and robust AI frameworks spanning the AI lifecycle, including multimodal perception, reliable model learning, deployment monitoring, and resilient AI operation in cyber-physical systems. In particular, we aim to contribute technologies and validation scenarios related to:

- adversarially robust multimodal AI systems,
- reliable Vision-Language-Action (VLA) and embodied AI models,
- AI reliability assessment, monitoring, and defense mechanisms,
- resilient AI deployment for industrial robotics and autonomous systems,
- real-world validation in autonomous manufacturing environments.

At UNIST, we are conducting nationally funded research projects on autonomous manufacturing AI, digital twin-based robot learning, and intelligent robotic systems in collaboration with industrial partners including HD Hyundai Heavy Industries and Korea Hydro & Nuclear Power (KHNP).

Through collaboration with European partners, we aim to support the development of scalable, humancentric, and internationally competitive SecureAI technologies and establish long-term Korea–EU research cooperation frameworks.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research

Biography (200~300 words)

Seungjoon Yang is Director of the Safe AI Research Center and Associate Professor in the Graduate

School of Artificial Intelligence at Ulsan National Institute of Science and Technology (UNIST), Republic of Korea. His research focuses on autonomous manufacturing AI, robotics AI, trustworthy AI systems, and intelligent cyber-physical systems for industrial and safety-critical environments.

His recent work includes Vision-Language-Action (VLA) systems for robotic task learning, digital twin-based robot learning frameworks, embodied AI systems, multimodal AI for industrial applications, and reliable AI deployment in complex industrial environments. He has led and participated in multiple nationally funded R&D projects related to autonomous manufacturing, industrial robotics, and AI-enabled robotic systems.

Prof. Yang actively collaborates with major Korean industrial partners, including HD Hyundai Heavy Industries and Korea Hydro & Nuclear Power (KHNP), on AI-driven manufacturing and intelligent robotic technologies. He also leads interdisciplinary research collaborations through the Safe AI Research Center at UNIST, where participating researchers work on broader topics including AI security, AI governance, resilient AI systems, and trustworthy AI evaluation.

He has published research in artificial intelligence, and industrial AI applications and is actively expanding international collaboration networks with universities, research institutes, and industry partners. His current interests align closely with Horizon Europe priorities in secure, resilient, and human-centric AI technologies for industrial and autonomous systems.

Research Area / Interests (+-10 lines)

- Autonomous manufacturing AI
- Robotics AI and intelligent robotic systems
- Vision-Language-Action (VLA) models
- Digital twin-based robot learning
- Embodied AI and multimodal AI systems
- AI for industrial automation and inspection
- Reliable AI for safety-critical environments
- Industry-academia collaborations with Korean manufacturing industries
- Leadership of nationally funded AI research centers at UNIST
- Large-scale R&D and publications in AI and robotics

Existing/Potential Partner(s)

Dominic Gorecky, Head of Swiss Smart Factory

Dominik Rohrmus, CTO, Labs Network Industrie 4.0 e.V. (LNI 4.0)

Motivation, Expectation and Plan

Existing/Potential Collaborators

- Dominic Gorecky, Head of Swiss Smart Factory
- Dominik Rohrmus, CTO, Labs Network Industrie 4.0 e.V. (LNI 4.0)

Potential Collaboration Areas

- Trustworthy and resilient AI systems
- Industrial AI and autonomous manufacturing
- Robotics AI and embodied AI systems
- Secure AI deployment for cyber-physical systems • Human-centric and safety-critical AI technologies

Target Regions for Collaboration

- Germany
- Switzerland
- EU research institutes and industrial innovation networks related to Industry 4.0 and trustworthy AI



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

Full Name (English)

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Your Target Calls/Topics

HORIZON-CL3-2026-01-FCT-06 - Prevention and mitigation of misuse of synthetic biology for bioterrorism purposes

HORIZON-CL3-2026-02-CS-ECCC-02 - Enhancing the Security, Privacy and Robustness of AI Models and Systems (SecureAI)

HORIZON-CL3-2026-01-SSRI-01 - Open topic on supporting disruptive technological innovations for civil security

Your expected contribution to the project/consortium

I can contribute an MEA-based electrochemical DNA synthesis and biosensing platform for synthetic biology biosecurity, including traceability/authentication of synthesized DNA, rapid electronic screening of suspect sequences, and automated assay workflows. My group can provide a 256-channel MEA switching board, impedance/electrochemical measurement modules, and FastAPI/MCP-based laboratory automation connecting liquid handling, qPCR, and AI-driven experiment planning. These capabilities can support proof-of-concept development, validation protocols, and data generation for biosecurity, SecureAI, and disruptive civil-security sensing proposals.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research

Biography (200~300 words)

Young Jun SONG is an Associate Professor in the Department of Bioengineering at Incheon National University. He works at the interface of bioengineering, semiconductor-based devices, electrochemistry, molecular diagnostics, and AI-enabled laboratory automation. His professional background includes industry experience at Samsung Electronics and Hyundai Motor Company, together with research experience at UC San Diego in the groups of M. J. Heller and X. Huang. This path shaped his perspective on translating device engineering, electronic measurement, and molecular biology into practical bioelectronic platforms. His current research focuses on electrochemical DNA synthesis and DNA data storage, microelectrode-array sensing, AI-assisted chip and experiment design, and secure automation for biological laboratories. He is particularly interested in preserving valuable biological data and domain knowledge while reducing risks of data leakage or misuse in AI-driven workflows. He has not yet led an EU Framework Programme project, and is using this forum to initiate concrete consortium discussions with EU partners in synthetic biology biosecurity, trustworthy AI, and civil-security diagnostics.

Research Area / Interests (+-10 lines)

Electrochemical DNA synthesis on microelectrode arrays (MEA); DNA data storage and programmable droplet/fluidic processing; MEA-based bioelectronic sensing and impedance/electrochemical measurement; AI- and robotics-assisted laboratory automation; AI-assisted chip design for bioelectronic and microelectrode-array devices; secure preservation and controlled reuse of biological data, experimental records, and domain knowledge; prevention of unintended leakage of sequence/design/experimental data through AI systems; auditable workflows for automated biolaboratories; electrode-chip-based capture and enrichment of genetic materials; rapid molecular diagnostics using MEA/bioelectronic sensing platforms; synthetic-biology biosecurity, including sequence screening, traceability, and authentication of synthesized DNA. Related biochip and bioelectronic research outcomes have been published in ACS Nano, Advanced Functional Materials, Science Advances, Advanced Science, and Nature Communications.

Existing/Potential Partner(s)

I am open to collaboration with EU partners and potential coordinators working on synthetic-biology biosecurity, DNA synthesis screening, bioforensics, MEA/bioelectronic sensing, laboratory automation, secure AI, and civil-security diagnostics. Through this programme, I hope to discuss concrete cooperation that can connect complementary technologies and build a competitive Horizon Europe Cluster 3 proposal. Beyond a single proposal, I would like to develop a durable Korea-EU research partnership that can lead to meaningful joint research outcomes, shared platforms, publications, and follow-up projects. I am therefore interested in meeting coordinators, work-package leaders, and research teams with whom we can define practical roles and continue collaboration after the forum.

Motivation, Expectation and Plan

My motivation is to expand our internally developed biochip, DNA data storage, MEA sensing, and AI automation technologies into broader Korea-EU collaborative research. I would like to explore projects ranging from DNA data storage and secure preservation of biological or cultural-heritage information to security and counter-terrorism sensing, liquid-biopsy-style molecular diagnostics, and AI automation for the bio domain. A key interest is how sensitive biological data, experimental records, and domain knowledge can be safely stored, reused, and protected from unintended leakage or misuse in AI-assisted workflows. Through this forum, I hope to meet partners who can connect these technologies with real civil-security and biomedical needs, define joint validation scenarios, and develop Horizon Europe proposals that can grow into long-term collaborative research outcomes beyond a single application.



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

Full Name (English)

Chae Sun NA

Position

Senior researcher, seed bank manager

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Your Target Calls/Topics

HORIZON-CL6-2026-01-BIODIV-06 Boosting agrobiodiversity for food security and sustainable competitiveness

Your expected contribution to the project/consortium

1. Dual System: Vaulting for Security, Banking for Innovation:

Seed Vault (Redundancy & Safety): We operate the only wild plant seed vault in Asia, ensuring the permanent, long-term safety duplication of genetic resources against global environmental risks.

Seed Bank (Research & Utilization): Our active Seed Bank serves as the operational center for phenotypic characterization, breeding research, and germplasm distribution, directly advancing the goals of agrobiodiversity.

2. Strategic Access to Asian Germplasm: Leveraging our robust regional network, we provide exclusive access to climate-resilient germplasm from Central Asia and other biodiversity hotspots. This addresses the critical need for novel traits in European breeding programs.

3. Integrated Translational Research Pipeline: As the leader of the national CWR project, we manage a comprehensive pipeline from field collection and ex-situ conservation to phenotypic evaluation and direct application in breeding. We provide both the genetic materials and the research methodology to integrate them into sustainable food systems.

4. Data-Driven Innovation (Seedpedia): Through our "Seedpedia" platform, we provide high-fidelity datasets on seed traits. This enables predictive modeling for crop improvement, directly supporting the EU's objective of enhancing sustainable competitiveness through data-informed biodiversity management.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Biography (200~300 words)

I am a Seed Scientist and the Seed Bank Manager at the Baekdudaegan National Arboretum, South Korea. I hold a B.S., M.S., and Ph.D. from Korea University, followed by postdoctoral research in Austria. My professional career is

dedicated to the ex-situ conservation and comprehensive study of wild plant seeds, bridging fundamental research with practical application.

Managing our active Seed Bank, I oversee the systematic collection, storage, and utilization of germplasm for research. As the project leader for the national Crop Wild Relatives (CWR) initiative, I manage a critical pipeline that integrates field collection, conservation, and research into the functional traits of wild species. Her core work includes developing "Seedpedia," a comprehensive database of wild seed traits, which is pivotal in transforming raw seed data into valuable insights for global biodiversity conservation.

I am deeply committed to international collaboration, leveraging her robust Asian networks to facilitate scientific exchange and the sustainable management of plant genetic resources. Building on my experience as a project coordinator for a Horizon Europe proposal, I remain actively engaged in pursuing international research consortiums. I am passionate about fostering interdisciplinary cooperation— harmonizing botanical science with art and public education—to advocate for the vital importance of wild plant conservation. Through my academic rigor and leadership, I continues to drive innovations that address the urgent need for biodiversity resilience in an era of climate change.

Research Area / Interests (+10 lines)

I specialize in Seed Physiology and Ecology, bridging ex-situ conservation with practical application. As the leader of the national CWR project, I manage the full lifecycle of seed research—from field collection and storage to physiological analysis. I am highly proficient in HPLC for analyzing bioactive compounds, and I spearheaded "Seedpedia," a database of wild seed traits to make biodiversity data actionable. My research is both rigorous and productive, yielding over 10 papers and 3 patents annually. Beyond academia, I actively manage corporate consortiums to co-develop products, turning foundational research into industrial solutions. I am committed to creating a seamless pipeline from biodiversity conservation to sustainable industry. I look forward to contributing this integrated expertise to our consortium to address urgent climate challenges.

Existing/Potential Partner(s)

SLU - Swedish University of Agricultural Sciences (스웨덴농업대학교) Lise
Lykke Steffensen

Motivation, Expectation and Plan

My commitment to the Horizon Europe framework is both strategic and long-term. Having led a consortium as a project coordinator last year—even though our proposal was not selected—I have gained invaluable, hands-on experience in navigating the complex proposal process and aligning diverse research goals. I am eager to leverage this experience to build robust, enduring partnerships with European researchers. My goal is not merely to participate in this specific call, but to establish a sustainable network that serves as a foundation for continuous scientific cooperation. I am dedicated to actively identifying and creating diverse international research opportunities beyond Horizon Europe, aiming to develop transformative projects that address our shared global challenges. I am excited to connect with prospective partners and foster a collaborative ecosystem where our collective expertise can drive meaningful innovation.



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

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Hyun Seok Kim

Position

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Your Target Calls/Topics

HORIZON-CL6-2026-01-CIRBIO-07: Advancing the European Bio-Based Innovation Enabled by Biotechnology and Biomanufacturing Concepts

Your expected contribution to the project/consortium

Our team at Seoul National University contributes to this Horizon Europe initiative by developing a next-generation biotechnology platform that enables rapid and climate-resilient post-harvest forest regeneration. We focus on the bio-manufacturing of green nanoparticles using non-pathogenic tree endophytic fungi, particularly *Trichoderma koningiopsis* strains isolated from drought-surviving *Abies koreana* roots. Leveraging the fungi's rich enzymatic systems and secondary metabolites, we biosynthesize iron oxide, cerium oxide, silicon, zinc, and manganese-based nanoparticles through an environmentally benign and low-energy process. These bio-derived nanoparticles function as nanozymes that enhance antioxidant capacity, stimulate root system development, and improve water and nutrient uptake, thereby increasing seedling survival and early growth under drought, heat, nutrient deficiency, and other climate-induced environmental stresses.

Our research approach integrates biochemical characterization, plant physiological analysis, and multi-scale field validation across diverse climate gradients in Korea and Europe. We combine photosynthesis and water-flux measurements, ROS detoxification assays, fine-root architectural analysis, and molecular profiling to elucidate the mechanisms through which nanoparticle–endophyte interactions promote stress resilience. Furthermore, we develop operationally feasible application strategies—including seed coating, root dipping, soil drenching, and foliar spraying—that are suitable for large-scale afforestation sites where labor and terrain constraints limit conventional treatments. Long-term trials in boreal, hemiboreal, temperate, and subalpine regions will be conducted jointly with European partners to optimize nanoparticle formulations and application frequencies for species such as Norway spruce, Scots pine, *Abies koreana*, *Pinus densiflora*, *Pinus koraiensis*, and *Quercus* species.

Through this biotechnology-enabled reforestation platform, our team provides a critical contribution to the project by creating a scalable bio-based innovation that aligns directly with the Horizon Europe priorities on biotechnology,

biomanufacturing, and the circular bioeconomy. Specifically, we deliver (i) a sustainable biogenic nanoparticle production system, (ii) enhanced regeneration strategies that accelerate forest recovery after logging and disturbance, (iii) significant reductions in sapling mortality and replanting costs, and (iv) a transferable EU–Korea nano-formulation toolkit that strengthens long-term forest resilience and biomass productivity. By restoring forest growth trajectories more rapidly, our technology also amplifies carbon sequestration potential and reinforces the feedstock base for Europe's sustainable wood-based bioeconomy.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Biography (200~300 words)

After completing my undergraduate and master's studies in Forest Resources at Seoul National University, I pursued advanced research training at the University of Washington and Duke University, focusing on forest physiology, ecohydrology, and carbon–water fluxes. My doctoral work at Duke deepened my expertise in canopy radiation modeling, stomatal regulation, and ecosystem carbon cycling. Following my postdoctoral fellowship at Duke, I returned to Seoul National University, where I now serve as a professor in Forest Sciences. Over the past decade, I have led national research programs on drought physiology, forest growth modeling, phenology, particulate matter mitigation, and carbon balance assessment using flux towers and advanced instrumentation. I have also expanded my work into plant biotechnology, developing endophyte-mediated nanoparticles that enhance seedling stress tolerance, now forming the foundation of EU–Korea collaborative research. Internationally, I have contributed to global forest databases and large-scale synthesis studies, publishing in leading journals including *Nature*, *Nature Communications*, and *PNAS*. I currently serve as Editor-in-Chief of *Forest Science and Technology* and as a committee member in scientific societies such as AsiaFlux and the Ecological Society of Korea. Throughout my career, I have sought to integrate physiology, biogeoscience, and biotechnology to understand and enhance forest resilience under climate change. My ongoing work aims to bridge science and practice by developing innovative, scalable solutions for forest restoration, carbon neutrality, and sustainable bioeconomies.

Research Area / Interests (+-10 lines)

Our research focuses on developing a biotechnology-enabled forest regeneration platform using endophytic fungus-mediated nanoparticles. We aim to synthesize eco-friendly metal and metal-oxide nanoparticles (FeO, CeO₂, Si, Zn, Mn) through green biomanufacturing processes using *Trichoderma* strains isolated from drought-surviving *Abies koreana*. These nanoparticles function as catalytic nanozymes that enhance ROS detoxification, stimulate fine-root development, and improve seedling drought and heat tolerance. By strengthening early-stage physiological resilience, the treatments significantly increase survival and growth rates in post-harvest and climate-disturbed forest areas. Our work integrates nanoparticle chemistry, tree physiology, and molecular analyses to reveal species-specific responses in *Picea abies*, *Abies koreana*, *Pinus* spp. and *Quercus* spp. Multi-site trials in Korea and Europe evaluate nanoparticle application strategies—seed coating, root dipping, soil drenching, and foliar spraying—optimized for large-scale and rugged afforestation sites. Through these approaches, we develop practical, low-input regeneration technologies suited for boreal, temperate, and subalpine forest systems. Ultimately, this research provides a scientifically grounded framework for accelerating post-harvest reforestation using nanotechnology. It also contributes to advancing forest ecophysiology and establishing a novel bio-based innovation pathway within Europe's climate-adaptive forestry sector.

Existing/Potential Partner(s)

Francisco X. Aguilar: Professor in Forest Economics at Swedish University of Agricultural Sciences

Torgny Näsholm: Professor in Forest Ecology and Management at Swedish University of Agricultural Sciences

Reimo Lutter: Professor in Forestry at Estonian University of Life Sciences

Alar Just: Professor in Structural Engineering at Tallinn University of Technology

Mirko Presser: Professor in Business Development and Technology at Aarhus University

Motivation, Expectation and Plan

My primary motivation for participating in this event is to strengthen the scientific foundation for our research on nanotechnology-enabled forest regeneration and to establish a cohesive Korea–Europe research framework for Horizon Europe. In particular, I aim to deepen collaboration with our existing partners in Sweden, Estonia, and Denmark by refining joint experimental designs, harmonizing analytical protocols, and co-developing cross-climate field trials using endophyte-mediated nanoparticles. I also expect this forum to play a critical role in expanding our collaboration network to include new research partners in Germany and France. Establishing partnerships with researchers from these countries will allow us to broaden the mechanistic scope of our nanoparticle studies and evaluate their performance across diverse European forest ecosystems, including boreal, temperate, and Mediterranean zones.



Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 &6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

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Personal Link(s)

<https://scholar.google.com/citations?user=-TS8RvQAAAAJ> www.microbiome.re.kr

Your Target Calls/Topics

HORIZON-CL6-2027-02-FARM2FORK-01-two-stage: Strengthening plant health: addressing emerging plant pest risks,
HORIZON-CL6-2026-01-BIODIV-06: Boosting agrobiodiversity for food security and sustainable competitiveness

Your expected contribution to the project/consortium

We may contribute to the consortium project through our expertise in rhizosphere microbiome studies including whole metagenome analysis to meta-omics functional characterization and systems/synthetic biology approaches.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research
TRL 4-6: Development / proof of concept / laboratory

Biography (200~300 words)

Dr. Jihyun F. Kim is a pioneer in microbial genomics, systems and synthetic biology, and microbiome research in Korea. He serves as the Yonsei Lee Youn Jae Fellow Professor and Director of the Microbiome Initiative at Yonsei University. He earned his bachelor's and master's degrees from Seoul National University, and received his Ph.D. from Cornell University in 1997, with seminal work on the pathogenicity mechanism of the fire blight bacterium. Following his postdoctoral experience at Cornell, he began his career as a professional scientist at Korea Research Institute of Bioscience and Biotechnology in 2000. From 2014 to 2022, Prof. Kim led the Strategic Initiative for Microbiomes in Agriculture and Food, a national program that advanced Korea's microbiome research infrastructure.

Between 2022 and 2024, he held multiple leadership roles at Yonsei University, including the Vice President of the Office of Research Affairs at Yonsei University, the President of the Yonsei University-Industry Foundation, and the Chief Executive Officer of Yonsei Technology Holdings Inc. He has spearheaded numerous high-impact publications in highly regarded journals such as Nature, Nature Biotechnology, Nucleic Acids Research, Genome Biology, and Microbiome. He is a respected member of the Korean Academy of Science and Technology, and also serves on the Deliberative Council within the Presidential Advisory Council on Science and Technology.

He has many scientific accomplishments, including several prestigious awards such as the NAS Award of the National Academy of Sciences of the Republic of Korea and Presidential Citation and Medal, as well as a number of highly cited publications on genome, evolution, pathogenicity, and interaction for a number of bacterial systems. With a career marked by academic excellence, strategic vision, and scientific innovation, Dr. Kim continues to push the boundaries of discoveries and application in life sciences.

<https://scholar.google.com/citations?user=-TS8RvQAAAAJ>

Research Area / Interests (+-10 lines)

Microbial Genomics and Metagenomics,
Systems/Synthetic Biology,
Genome Evolution,
Microbiome Studies,
Microbe-Host Interactions

Existing/Potential Partner(s)

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Registration Form: Korea-EU Horizon Europe Researchers Networking Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

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<https://scholar.google.com/citations?user=fXq6jCAAAAAJ&hl=en> <https://kfbt.korea.ac.kr/kfbt/3117/subview.do>

Your Target Calls/Topics

HORIZON-CL6-2026-2027-01-CIRCBIO-0X: Increasing the circularity of bio-based sector: upcycling and recycling for higher value and environmental benefits (or similar calls related to sustainable processing and bioactives in Cluster 6)

Your expected contribution to the project/consortium

Korea University will lead the in-vitro and pathological efficacy/toxicity cross-validation of natural bioactives. We utilize a multi-task AI platform (Pharmaco-Net, provided by our SME partner, Calici) that predicts cellular permeability and binding affinity. Our core contribution is establishing New Approach Methodologies (NAMs) to minimize animal testing and providing safety/efficacy evaluations for upcycled plant resources, which perfectly aligns with the European Green Deal and Circular Bioeconomy.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory

Biography (200~300 words)

Professor Young Jun Kim is a Professor in the Department of Food and Biotechnology at Korea University, South Korea. His core research expertise lies in the discovery and industrialization of functional natural products and bioactive materials through rigorous in vitro and in vivo experiments. Throughout his academic career, he has extensively contributed to standardizing natural ingredients, elucidating their mechanisms of action, and validating preclinical efficacy for applications in metabolic and neurodegenerative diseases.

Recently, his research has advanced toward regulatory science, focusing on the development and global institutionalization of alternative testing methods (New Approach Methodologies, NAMs) that utilize Artificial Intelligence for natural product discovery. He is currently a key Principal Investigator in the 'PROACTIVE' global consortium and is actively preparing a Horizon Europe Cluster 6 proposal. In this multinational, multi-actor initiative, he collaborates closely with leading European institutions, including Utrecht University (the Netherlands) and the

University of Oxford (UK), as well as partners from Canada (University of Saskatchewan) and Ukraine. Through these collaborative EU research projects, Professor Kim aims to overcome the limitations of traditional animal testing by integrating AI-driven predictive modelling with cross-validated assessments of pathological efficacy and toxicity.

Research Area / Interests (+-10 lines)

Professor Kim's main research field focuses on the functional evaluation, mechanism elucidation, and standardization of natural product-derived bioactive compounds. His technological uniqueness lies in integrating multi-task Artificial Intelligence (such as the Pharmaco-Net platform, via SME partnership) with traditional in vitro and in vivo cell permeability and toxicity testing. This multidisciplinary approach enables rapid screening and efficacy prediction of complex natural materials, serving as a disruptive technology that replaces costly, time-consuming animal testing (NAMs). His flagship research includes the preclinical validation of various plant extracts and the establishment of manufacturing standardization models. Currently, he is highly interested in expanding this AI-driven alternative test evaluation platform to support the global commercialization of sustainable bio-based products. His ongoing Horizon Europe 'PROACTIVE' project perfectly reflects this research excellence, aiming to build a globally standardized predictive framework for upcycled crop-derived bioactives while closely aligning with the European Green Deal.

Existing/Potential Partner(s)

We have already formed a strong multinational consortium named "PROACTIVE". Our existing European and global partners include:

- Netherlands (EU): Prof. Sanne Abeln, Dr. Roxana Radulescu, Dr. Ronnie de Jonge (Utrecht University)
- UK (Associated): Prof. Grant Churchill, Prof. Daniel Anthony (University of Oxford)
- Ukraine (Associated SME): Enamine
- Canada (Global Partner): Prof. Martin J.T. Reaney (Univ. of Saskatchewan) & Prairie Tide Diversified (SME).

We are open to expanding our network with institutions possessing expertise in sustainable biomanufacturing and pilot-scale processing.

Motivation, Expectation and Plan

My primary motivation for attending this forum is to hold a face-to-face kick-off meeting with our EU partners (Utrecht Univ. and Oxford Univ.) to finalize our Horizon Europe Full Proposal for the 'PROACTIVE' project. Specifically, we aim to confirm the Work Package (WP) distribution, discuss the Lump-sum budget allocation, and refine our strategy to maximize EU policy alignment (e.g., Multi-actor approach, zero pollution). Our concrete follow-up plan is to successfully submit the joint proposal for the upcoming Horizon Europe Cluster 6 calls and to solidify our global research network.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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https://researchgate.net/profile/Tetiana-Fedoniuk?ev=hdr_xprf

<https://scholar.google.com/citations?hl=ru&user=UAb4YhoAAAAJ>

Your Target Calls/Topics

HORIZON-CL6-2026-01-CIRBIO-07 Advancing the European Bio-Based Innovation Enabled by Biotechnology and Biomanufacturing Concepts

HORIZON-CL6-2027-02-FARM2FORK-01-two-stage Strengthening plant health: addressing emerging plant pest risks

HORIZON-CL6-2026-2027-01-CIRCBIO-09 Increasing the circularity of bio-based sector: upcycling and recycling for higher value and environmental benefits

Your expected contribution to the project/consortium

PNU will contribute expertise in circular bioeconomy, biomass valorisation, soil health and sustainable agriculture. We can support the development and demonstration of biotechnology-enabled solutions for converting agricultural residues, organic waste streams and underutilised biomass into high-value bio-based products. Through our network of farmers, SMEs, municipalities and research organisations, PNU can provide pilot sites, stakeholder engagement and real-life validation environments in Ukraine. Our experience in Horizon Europe projects, digital agriculture, remote sensing and environmental monitoring will support data-driven assessment of environmental, economic and social impacts, facilitating the uptake and scaling-up of innovative circular bio-based solutions.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing

TRL 7-9: Pilot scale / demonstration / deployment

Your expected role in the project

Work Package Leader, Partner

Biography (200~300 words)

Prof. Tetiana Fedoniuk is Head of the Educational and Scientific Centre for Agriculture, Environment and Bioeconomy at Polissia National University (Ukraine) and a Professor of Ecology. She holds a Doctor of Agricultural Sciences degree and has over 20 years of experience in environmental sciences, sustainable agriculture, biodiversity conservation, ecosystem restoration and digital environmental monitoring.

Her research focuses on soil health, agroecology, ecosystem restoration, climate adaptation, GIS and remote sensing applications, biodiversity monitoring, and sustainable land management. In recent years, she has been actively involved in the development of innovative approaches for environmental recovery and the integration of digital technologies into agricultural and ecological systems. Prof. Fedoniuk has extensive experience in European research and innovation programmes. She currently serves as Country Leader in the Horizon Europe project AGROSUS (101084084), focused on agroecological strategies for sustainable weed management, and as Coordinator of POLIDIH (101191240), a European Digital Innovation Hub funded under the Digital Europe Programme. She has also coordinated and participated in several national and international projects related to geospatial technologies, sustainable agriculture, environmental monitoring and digital transformation.

Between 2024 and 2025, she served as the Ukrainian National Contact Point for Horizon Europe Cluster 6 (Food, Bioeconomy, Natural Resources, Agriculture and Environment), supporting international cooperation and strengthening Ukraine's integration into the European Research Area. She is actively involved in science-policy initiatives and contributes to national recovery, sustainability and innovation strategies. Prof. Fedoniuk is particularly interested in building international partnerships in the fields of soil health, bioeconomy, biotechnology, ecosystem restoration, digital agriculture and sustainable recovery of war-affected environments.

Research Area / Interests (+-10 lines)

Research Areas and Expertise

- Soil health, soil degradation and restoration
- Agroecology and sustainable agricultural systems
- Circular bioeconomy and biomass valorisation
- Ecosystem restoration and post-disturbance recovery
- Restoration of war-affected and contaminated environments
- GIS, remote sensing and environmental monitoring
- Digital agriculture and geospatial decision-support systems
- Biodiversity conservation and landscape ecology
- Climate change adaptation and nature-based solutions
- Key expertise and achievements
- Coordinator of the Digital Europe project POLIDIH and Country Leader of the Horizon Europe project AGROSUS
- Extensive experience in multi-actor approaches, stakeholder engagement and Living Lab methodologies
- Development of geospatial platforms and digital tools for environmental monitoring and agricultural decision-making
- Expertise in soil restoration, sustainable land management and environmental recovery planning
- Author of more than 150 scientific publications and contributor to science-policy initiatives in Ukraine and the European Research Area
- Co-inventor of a patented Earth Observation data receiving station and developer of innovative GIS-based monitoring solutions
- Strong experience in Horizon Europe proposal development, consortium building and international research cooperation

Motivation, Expectation and Plan

My primary motivation for participating in the Korea–EU Horizon Europe Researchers Networking Forum is to establish new strategic partnerships between Ukrainian, European and Korean research organisations and to explore opportunities for joint participation in Horizon Europe projects. As a researcher and project coordinator actively involved in Horizon Europe and Digital Europe initiatives, I am particularly interested in building collaborations in the fields of soil health, agroecology, biotechnology, circular bioeconomy, digital agriculture and ecosystem restoration.

Through this networking opportunity, I aim to identify complementary expertise, exchange knowledge on innovative technologies and discuss potential cooperation within upcoming Horizon Europe calls. I am especially interested in connecting with partners working on biotechnology-enabled innovation, sustainable food systems, environmental monitoring, nature-based solutions and recovery of degraded ecosystems.

Following the event, I plan to initiate bilateral meetings with potential partners, develop joint project concepts, explore opportunities for researcher mobility and institutional cooperation, and prepare collaborative proposals under Horizon Europe. I also expect to establish long-term cooperation agreements between PNU and Korean and European institutions, contributing to stronger international research and innovation networks and supporting Ukraine's integration into the European Research Area.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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Your Target Calls/Topics

HORIZON-CL3-2026-01-DRS-01 Designing new ways of risk awareness and enhanced disaster preparedness

HORIZON-CL3-2026-01-INFRA-03 Targeted innovative capabilities for the resilience of critical entities to natural and human-induced disasters, including hybrid scenarios

HORIZON-CL3-2026-01-FCT-06 Prevention and mitigation of misuse of synthetic biology for bioterrorism purposes

HORIZON-CL6-2026-01-BIODIV-06 Boosting agrobiodiversity for food security and sustainable competitiveness

HORIZON-CL6-2026-01-CIRBIO-07 Advancing the European Bio-Based Innovation Enabled by Biotechnology and Biomanufacturing Concepts

HORIZON-CL6-2027-02-FARM2FORK-01-two-stage Strengthening plant health: addressing emerging plant pest risks

HORIZON-CL6-2026-2027-01-CIRCBIO-09 Increasing the circularity of bio-based sector: upcycling and recycling for higher value and environmental benefits

Your expected contribution to the project/consortium

The Institute for Research in Circular Economy and Environment "Ernest Lupan" (IRCEM) expects to contribute to the consortium by bringing strong expertise in circular economy, environmental sustainability, bioeconomy, stakeholder engagement and capacity building. IRCEM can support the development of project activities related to circular business models, resource efficiency, upcycling and recycling strategies, agrobiodiversity, sustainable value chains, climate resilience, risk awareness and community preparedness.

IRCEM's added value lies in its ability to connect research, policy, business and civil society actors, especially in Romania and Central-Eastern Europe. Within a future consortium, IRCEM can contribute to stakeholder mapping, multi-actor engagement, co-creation workshops, training programmes, dissemination and communication activities, policy recommendations, exploitation strategies and replication plans. IRCEM can also support the identification and mobilisation of relevant local and regional actors, including public authorities, SMEs, NGOs, clusters, educational institutions and community organisations.

Depending on the specific project topic, IRCEM is prepared to lead or contribute to work packages focused on circular economy assessment, societal acceptance, awareness raising, behavioural change, policy support, knowledge transfer and impact maximisation. We can also provide access to Romanian and regional case studies, support pilot validation activities, organise local stakeholder consultations and contribute to the design of practical solutions that can be replicated in other European regions.

IRCEM's objective is to act as a reliable and impact-oriented partner, helping the consortium translate research and innovation results into practical, policy-relevant and socially accepted solutions that support Europe's transition towards a more circular, resilient and sustainable economy.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Your expected role in the project

Project Coordinator, Work Package Leader, Partner

Biography (200~300 words)

Dr. Eng. Ec. Elena-Simina Lakatos, Senior Researcher I, habil., is the General Director and Senior Scientific Researcher at the Institute for Research in Circular Economy and Environment "Ernest Lupan" (IRCEM), Romania. She is one of the leading national and European experts in the fields of circular economy, bioeconomy, and the green transition. With more than a decade of experience at the intersection of research, public policy, and innovation, she has made significant contributions to the development and implementation of circular economy strategies, governance frameworks, and applied instruments at local, national, and European levels.

Her work focuses on evidence-based public policies, multi-level governance, circular and low-carbon business models, sustainable energy systems, climate resilience, and green-blue infrastructure. She has advanced expertise in life-cycle assessment tools, including LCA, PEF, and TEA, as well as in the EU Taxonomy and the Do No Significant Harm principle, ESG/CSRD reporting, circular public procurement, and industrial symbiosis, with applications in the construction, agri-food, energy, and waste management sectors.

Dr. Lakatos is actively involved in major European programmes, including Horizon Europe, Interreg Europe, the Interreg Danube Region Programme, Romania's National Recovery and Resilience Plan, and Erasmus+, where she has held roles as project manager, work package leader, and scientific coordinator. Her work has addressed topics such as the circular economy, sustainable food systems, hydropower refurbishment, energy self-sufficiency, and climate change adaptation. She has also contributed to the development of Romania's National Circular Economy Strategy and Action Plan.

In parallel, she is a PhD supervisor in Engineering and Management in Agriculture and Rural Development at the University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca and has served as an associate lecturer at the Technical University of Cluj-Napoca. She is a recognised evaluator for European and national research and innovation programmes, a member of European Commission advisory structures, and Chair of the ASRO/CT 398 Technical Standardisation Committee on Circular Economy. Her current interests focus on accelerating the implementation of the circular economy through standardisation, digitalisation, and systemic innovation in support of climate neutrality and the Sustainable Development Goals.

Research Area / Interests (+10 lines)

Circular economy, bioeconomy, LCA, LCC, GHG, low-carbon technologies, CCUS, circular economy standardisation, green transition, evidence-based public policies, multi-level governance, industrial symbiosis, circular settlements, green-blue infrastructure, climate resilience, energy efficiency, digital product passport, EU Taxonomy and DNSH, PEF/TEA, circular public procurement, ESG and CSRD reporting, Scope 1–3 carbon accounting, circular construction materials, materials passport, BIM and digital twins, eco-design and reparability, waste management and EPR, social economy, nature-based solutions, living labs and co-creation.

Motivation, Expectation and Plan

The Institute for Research in Circular Economy and Environment “Ernest Lupan” (IRCEM) is motivated to participate in this event in order to identify strong partners from Korea and build competitive consortia for upcoming Horizon Europe calls in the fields of circular economy, bioeconomy, agrobiodiversity, climate resilience, disaster preparedness and sustainable innovation. As an organisation dedicated to accelerating the transition towards circular and environmentally responsible models, IRCEM sees this networking opportunity as a strategic step to connect its expertise in stakeholder engagement, policy support, capacity building, circular business models and regional ecosystem mobilisation with complementary technical and scientific expertise from across World.

Through this event, IRCEM aims to identify partners for concrete project ideas related to the circularity of bio-based sectors, upcycling and recycling, agrobiodiversity for sustainable food systems, bio-based innovation, risk awareness and disaster preparedness. We are particularly interested in meeting universities, research organisations, technology providers, SMEs, public authorities, clusters, living labs and civil society organisations that are preparing proposals under Horizon Europe Cluster 6 and Cluster 3 calls. Our specific goal is to define IRCEM’s added value within future consortia, especially in work packages related to circular economy strategies, stakeholder mapping, multi-actor engagement, training, dissemination, exploitation, policy recommendations and replication in Romania and Central-Eastern Europe.

As a concrete follow-up, IRCEM plans to organise bilateral meetings with selected partners immediately after the event, exchange concept notes and partner profiles, and agree on roles for joint proposal submissions. Where there is a strong strategic fit, IRCEM is ready to contribute to the preparation of Horizon Europe proposals, participate in partner meetings, support the drafting of relevant work packages, and explore the signing of Memoranda of Understanding for long-term cooperation. Our expected outcome is to leave the event with at least two to three concrete consortium opportunities and a clear roadmap for joint proposal development in 2026–2027.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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**Your Target Calls/Topics**

HORIZON-CL6-2026-01-BIODIV-06 Boosting agrobiodiversity for food security and sustainable competitiveness

HORIZON-CL6-2027-02-FARM2FORK-01-two-stage Strengthening plant health: addressing emerging plant pest risks

Your expected contribution to the project/consortium

HORIZON-CL6-2026-01-BIODIV-06

Expected contribution / technical strategy:

Expertise in plant pathology, crop breeding, plant health monitoring, molecular diagnostics, and multi-location field trials. Contribution to activities related to agrobiodiversity assessment, crop resilience, disease management, and stakeholder engagement. Interested in participating as a partner and potentially leading relevant work packages.

HORIZON-CL6-2027-02-FARM2FORK-01-two-stage

Expected contribution / technical strategy:

Expertise in plant health, emerging pests and pathogens, molecular diagnostics, disease surveillance, and Horizon Europe project coordination. Development of integrated approaches combining field monitoring, diagnostics, predictive modelling, and digital tools for early detection and management of plant health risks. Interested in coordinating the proposal and consortium building.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

TRL 7-9: Pilot scale / demonstration / deployment

Your expected role in the project

Project Coordinator, Work Package Leader

Biography (200~300 words)

Plant pathologist, innovation manager, and Horizon Europe project coordinator with 18 years of experience in agriculture, plant health, crop breeding, and research management. My work focuses on bridging agriculture and advanced technologies, including sensors, AI, digital agriculture, and sustainable bio-based solutions. I coordinated the Horizon Europe project CREDIT Vibes (<https://nutribreedinghub.rs/>) and currently serve as Project Manager of the Horizon Europe project EINSTEIN (<https://einsteinproject.com/>), a project concept that I initiated and successfully developed into a funded Horizon Europe action.

Within EINSTEIN, I collaborate with a multidisciplinary team developing innovative electronic materials and sensors derived from food and agricultural waste streams for applications in biomedicine and sustainable technologies. My expertise covers plant disease monitoring, molecular diagnostics, crop resilience, and the translation of scientific discoveries into practical innovations. I actively generate project concepts, build international consortia, professionally develop Horizon Europe proposals, and maintain a strong network of academic, industrial, and innovation partners across Europe.

Research Area / Interests (+10 lines)

Research interests include sustainable agriculture, plant health, nutribreeding, functional crops, digital agriculture, AI-assisted disease monitoring, bio-based materials, and agri-food technologies for biomedical applications. A key innovation is the Nutribreeding concept, which integrates breeding, organic production, and the valorisation of nutrient-rich crops. Through the Horizon Europe project CREDIT Vibes, organically produced crops with enhanced nutritional and bioactive properties were developed and subsequently utilised within the Horizon Europe project EINSTEIN to create nutrifood-based electronic materials and biosensors for biomedical applications, including early colorectal cancer detection.

Research excellence is reflected through co-authorship of nine soybean varieties, four patents related to agricultural technologies and seed processing, an internationally recognized software solution for pest monitoring (Bio-Calendar), numerous scientific publications, and the successful development and management of Horizon Europe projects and international research consortia.

Motivation, Expectation and Plan

My main motivation for participating in this event is to establish strategic collaborations with Korean and European partners and to identify complementary expertise for future Horizon Europe proposals. I am particularly interested in building consortia around plant health, agrobiodiversity, digital agriculture, AI-enabled monitoring systems, bio-based materials, and sensor technologies. Through this networking opportunity, I aim to identify partners for the HORIZON-CL6-2027-02-FARM2FORK-01 call, where I am interested in contributing to consortium development and proposal coordination, as well as for biodiversity and bio-based innovation topics under Cluster 6.

I am also interested in exploring synergies between agriculture, sensing technologies, and biomedical applications. As a follow-up, I expect to organize bilateral meetings with interested partners, exchange project concepts, and initiate the preparation of joint Horizon Europe proposals and long-term research collaborations.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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**Your Target Calls/Topics**

HORIZON-CL3-2026-01-DRS-01 Designing new ways of risk awareness and enhanced disaster preparedness

HORIZON-CL6-2026-01-CIRBIO-07 Advancing the European Bio-Based Innovation Enabled by Biotechnology and Biomanufacturing Concepts

Your expected contribution to the project/consortium

GRADIANT would like to address the topics, not only the two selected, with our following expertise:

- Cloud-Edge Continuum: Moves computing from centralized clouds to edge and end devices to improve efficiency, latency, and privacy, enabling distributed intelligence across nodes for critical applications.
- Advanced Data Management: Combines Big Data, DataOps, and privacy-enhancing technologies to ensure high-quality, secure, and interoperable data use across the full lifecycle of AI-driven solutions.
- Applied Artificial Intelligence: Develops efficient and trustworthy AI solutions with built-in privacy and security, spanning multimodal systems, cybersecurity, and advanced paradigms like neurosymbolic and decentralized AI.
- Autonomous Systems: Creates intelligent, adaptive platforms for air, land, and maritime use with resilient navigation, sensor fusion, and real-time decision-making in complex environments.
- Cybersecurity Technologies: Delivers advanced threat detection and response using AI, encryption, and behavioral analytics to protect data, systems, and infrastructure.
- Multimedia Analysis: Develops AI-based image and video analysis solutions for surveillance, identity verification, and autonomous systems, leveraging computer vision and multimodal processing.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Your expected role in the project

Work Package Leader, Partner

Biography (200~300 words)

Industrial Engineer with extensive expertise in R&D project management, bringing over 10 years of experience in the development, coordination, and implementation of funding programmes at regional, national, and particularly European levels. My career has progressed across private industry and multi-sector technology centres, providing a strong multidisciplinary perspective. I am currently part of Gradiant, a leading organization in advanced telecommunications solutions, where I contribute to the successful delivery of innovative projects. My experience in European initiatives includes drafting competitive proposals for Fast Track to Innovation and the Horizon 2020 SME Instrument, alongside extensive use of the Funding & Tenders Portal for submission, monitoring, and reporting processes. I have led Grant Agreement and Consortium Agreement negotiations and overseen administrative and financial management in Horizon 2020, Horizon Europe, and Interreg Sudoe programmes, ensuring compliance, efficiency, and impactful project outcomes. Additionally, I foster collaboration among international partners and stakeholders to drive strategic alignment and maximize project value.

Research Area / Interests (+-10 lines)

- Coordination and research on UxVs, including digital twins.
- Video analysis for security inspection and threats detection (CL3) and categorization/plantation evolution (CL6).
- Data quality and intelligence analysis for decision making.
- Communication infrastructure deployment (tethered drones, communication in GNSS denied areas, connection solutions in rural areas)
- Natural Language processing.
- Cybersecurity: Anomaly detection, User and entity behaviour analytics) specially for hybrid security scenarios.

Motivation, Expectation and Plan

GRADIANT would like to participate in this forum to strengthen EU–Korea collaboration on pressing global challenges related to resilience, sustainability, and bio-based innovation. This forum offers a unique opportunity to exchange knowledge, identify synergies, and co-develop impactful research initiatives.

Our main outcomes include:

- Networking for consortia building and proposal defined.
- Identification of joint call opportunities.
- Knowledge exchange EU ↔ Korea.

As for follow-up plans:

- Joint proposal submission.
- Multidisciplinary partner meeting.
- Any other kind of collaboration.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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**Your Target Calls/Topics**

HORIZON-CL6-2026-01-BIODIV-06 Boosting agrobiodiversity for food security and sustainable competitiveness

Your expected contribution to the project/consortium

Our work on geographically explicit suitability modelling of a wide range of underutilised crops in a changing climate is a versatile and impactful work package for HORIZON-CL6-2026-01-BIODIV-06 proposals.

At the Norwich Institute for sustainable Development and the University of East Anglia School of Environmental Sciences, we are developing a platform, called Blacksheep, for geospatial crop suitability forecasts under climate change. This is based on the Ecocrop database, allowing it to handle a large number of plant species (currently 545), including many underutilised species for which more detailed physiological crop models are not available. The tool was originally developed for India and Nepal (operating at district level), and through this work package we will adapt it for other world regions including Europe. Among other use cases it allows to match forecast climates to other areas where those conditions already exist. Previous climate analogue models have been limited by the applicability of different agricultural systems in identified analogue regions. Our model matches areas not on climatic conditions directly, but on the suitability of a user-defined basket of crops, taking into account climatic and soil properties and the presence of irrigation. In this way, the tool provides actionable insights for farmers and policymakers. Already existing crop mixes and practices, as well as forecasts of high suitability can provide practicable adaptation pathways. The fact that our tool handles such a wide range of crop species makes it particularly useful for identifying ways in which crop diversification can support climate resilience.

Through NISD, we can integrate this work with genomics and bioinformatics expertise at the John Innes Centre and Sainsbury Laboratory (e.g. in the recent Watkins collection of wheat landraces, or the Mendel-Seq effort in pea pangenomics), and deep expertise across many aspects of crop science, in both major and underutilised crops.

Your expected role in the project

Work Package Leader, Partner

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Biography (200~300 words)

I am a crop scientist with a focus on underutilised legume crops. I did my PhD at the John Innes Centre, UK, followed by postdocs at JIC and the International Livestock Research Institute, Kenya, before joining the Norwich Institute for Sustainable Development at the University of East Anglia as a John Innes Foundation Fellow in Sustainable Agriculture.

My work combines foundational crop science, translational work, social and environmental sciences. A particular focus of my career has been on grasspea (*Lathyrus sativus*), including its genome, global diversity, stress responses, biochemistry, breeding, and seed systems. This work aims to deliver the potential of this highly stress resilient legume crop for farmers in the Global South (Ethiopia, Bangladesh and India) and in Europe. I have led the work on projects funded by BBSRC and Innovate UK, and I co-supervise the development of Blacksheep. Through NISD, I am involved in a range of projects connecting the Norwich Biosciences Institutes and the University of East Anglia, bridging between crop science and social science research on food security, farmer preferences and cultural context of agriculture in smallholder systems and environmental research modelling the changing suitability of crops under climate change futures.

Beyond this, I advise on transdisciplinary aspects on the JIC Institute Strategic Programmes, particularly Harnessing Biosynthesis (HBio) and Advancing Plant Health (APH), giving me a broad insight into the research capacities and partnership opportunities across the Norwich Research Park.

Research Area / Interests (+-10 lines)

My research interests involve harnessing the potential of underutilised crops, which requires transdisciplinary approaches to address both underlying biological limitations such as antinutritional factors or lack of breeding resources, and applied work to understand seed systems and value chains for such crops to be utilised. A particular focus has been the genomics and diversity of underutilised legumes (e.g. genomes of grasspea, African Yam Bean, Lablab).

My interest in climate resilience connects this to our work on crop suitability modelling (two manuscripts currently in development). Blacksheep is unique in its ability to model hundreds of plant species (including food, feed and fibre crops, annuals and perennials, as well as non-crop species) making it a very useful tool to support decision-making regarding agrobiodiversity.

Motivation, Expectation and Plan

I aim to find opportunities to partner in HORIZON-CL6-2026-01-BIODIV-06 proposals under development, by integrating our work on Blacksheep as a work package. Our crop climate modelling expertise and research on the diversity and potential of underutilised crops would be applicable to a range of projects investigating agricultural diversification, and the ability to identify real-world analogues will accelerate adaptation efforts and farmer peer learning.

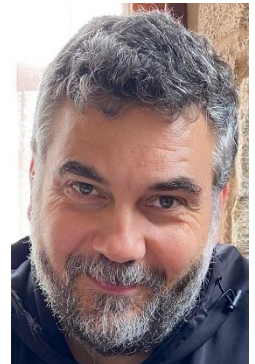
I am also keen to explore opportunities for future partnerships on Horizon proposals, or to link workshop participants with other expertise and capacity available on the Norwich Research Park.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

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<https://investigacion.udc.es/gl/Research/Details/G00087>
<https://www.udc.gal/ctc>
<https://pdi.udc.es/gl/File/Pdi/6Q67G>
<https://scholar.google.es/citations?user=OIlaFIMAAAJ&hl=es>

Your Target Calls/Topics

HORIZON-CL3-2026-02-CS-ECCC-01 Approaches and tools for security in software and hardware development and assessment
HORIZON-CL3-2026-01-SSRI-01 Open topic on supporting disruptive technological innovations for civil security

Your expected contribution to the project/consortium

The Cybernetics Science and Technique Research Group (CTC) can contribute its expertise in intelligent modelling, artificial intelligence, anomaly detection, optimisation, and decision-support systems for critical infrastructures and industrial environments. Our proposed research approach combines real-time monitoring data, digital twins, advanced analytics, and AI-based predictive models to detect anomalies, emerging risks, fires, and safety-related incidents while minimising false alarms. Building upon these capabilities, the system can support emergency management through adaptive risk assessment and intelligent recommendation of response actions, enabling a transition from reactive to predictive and resilient safety management. CTC is interested in contributing to the design, development, validation, and demonstration of these technologies within collaborative Horizon Europe projects.

The current TRL of your research or technology

TRL 1-3: Fundamental / exploratory research
TRL 4-6: Development / proof of concept / laboratory testing Transporte
TRL 7-9: Pilot scale / demonstration / depolyment

Your expected role in the project

Project Coordinator, Work Package Leader, Partner

Biography (200~300 words)

The Cybernetics Science and Technique Research Group (CTC) at Universidade da Coruña conducts research and innovation in the fields of Automation, Control Engineering, Artificial Intelligence, IoT, and Industry 4.0. Recognised and funded by the Xunta de Galicia as a Research Group with Growth Potential, CTC brings together more than 30 researchers and technical staff, including senior researchers, postdoctoral fellows, PhD candidates, and specialised technical personnel.

The group's research activities focus on intelligent modelling, optimisation and control systems, fault and anomaly detection, advanced sensing technologies, data analytics, virtual instrumentation, cybersecurity, environmental monitoring, and energy efficiency. These technologies are applied across a wide range of domains, including healthcare, industrial processes, critical infrastructures, environmental applications, and smart resource management.

CTC has extensive experience in the execution and coordination of research and innovation projects at both European and national levels, complemented by a strong track record of technology transfer and collaboration with industry. The group actively participates in multidisciplinary projects involving academic institutions, public organisations, and private companies, contributing scientific expertise as well as practical solutions with real-world impact.

Current and recent activities include projects related to cybersecurity of critical infrastructures, intelligent water network management, environmental radiological monitoring, sustainable communities, digital transformation, and advanced industrial systems. Through these initiatives, CTC has strengthened its expertise in addressing complex societal, industrial, and environmental challenges.

The group is committed to expanding its international collaborations and contributing to ambitious research consortia within Horizon Europe, supporting the development of innovative and sustainable solutions aligned with European priorities.

Research Area / Interests (+-10 lines)

CTC's research activities focus on automation, control engineering, and artificial intelligence, with applications across multiple sectors. Our work promotes the adoption of intelligent technologies in domains such as healthcare, industry, cybersecurity, environmental monitoring, and energy efficiency. Key research topics include data analytics and processing, advanced and intelligent control, system modelling and optimisation, fault and anomaly detection, and the development of virtual and intelligent instrumentation.

Our main research areas are:

- Intelligent modelling, optimisation, and control systems.
- Fault and anomaly detection using conventional and AI-based approaches.
- Development of novel sensing technologies, including robust and virtual sensors.

Motivation, Expectation and Plan

Our main motivation is to contribute to the achievement of the objectives of Clusters 3 through applied research, generating practical and impactful solutions to current societal and environmental challenges. We expect this Forum to facilitate the identification of complementary partners and the development of strong international consortia for future Horizon Europe calls. Our research group is fully committed to collaborative research and is willing to assume any role within future projects, including coordinator, work package leader, or partner, depending on the needs and expertise required by each consortium.



Korea-EU Horizon Europe Researchers Consulting Forum 2026 on Cluster 3 & 6

Cluster 3: Civil security for society & Cluster 6: Food,
Bioeconomy, Natural Resources, Agriculture and Environment

Full Name (English)

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Your Target Calls/Topics

HORIZON-CL3-2026-01-DRS-01 Designing new ways of risk awareness and enhanced disaster preparedness

HORIZON-CL6-2026-01-BIODIV-06 Boosting agrobiodiversity for food security and sustainable competitiveness

Your expected contribution to the project/consortium

Impact Intelligence Lab proposes to contribute a geospatial intelligence and decision-support layer to consortia focused on disaster risk awareness and preparedness. Our technical strategy combines Earth observation data (Copernicus Sentinel, ERA5 reanalysis), spatial exposure and vulnerability analysis, and composite risk indices to produce decision-grade risk maps and briefings for planners, emergency managers, and frontline organizations. We develop open, reproducible methods that make risk evidence interpretable and actionable beyond specialist audiences.

Our specific contribution would include:

- (1) geospatial exposure and vulnerability indicator development for target regions, with a focus on Southeast Asia as a high-risk, data-sparse context;
 - (2) design and development of interactive risk awareness dashboards and public-facing knowledge products;
 - (3) field validation with practitioner partners to ensure tools meet actual decision requirements;
 - (4) open data publication and methods documentation to support reproducibility and cross-consortium reuse.
- Current TRL for our core geospatial risk analysis pipeline: TRL 4–5, with pilot deployments in coastal resilience contexts.

For HORIZON-CL6-2026-01-BIODIV-06: Impact Intelligence Lab proposes to contribute AI-powered geospatial intelligence for agrobiodiversity monitoring and smallholder food system resilience, drawing on field experience in Thailand and the broader Mekong region. Our approach combines satellite-derived land-use and crop diversity indicators, climate exposure analysis, and local knowledge integration to build monitoring infrastructure for agrobiodiversity outcomes. We bring Southeast Asia field access, practitioner networks, and open data methods that European consortium partners typically cannot source internally.

The current TRL of your research or technology

TRL 4-6: Development / proof of concept / laboratory testing Transporte

Your expected role in the project

Project Coordinator

Biography (200~300 words)

Suchada Hnoonpakdee is the founder of Impact Intelligence Lab, an independent research and intelligence organization applying data, AI, and geospatial analysis to climate resilience, environmental risk, and social systems change. She brings over six years of experience across software engineering, AI product development, and climate technology entrepreneurship.

Her professional track record spans from AI-powered Earth observation platform development at RIFFAI, and the founding of CarbonNexus - a climate intelligence platform recognised as a Youth Climate Innovation Finalist through Seedstars and UNEP's Climate Technology Centre and Network (CTCN). She has led cross-functional international teams through the full product lifecycle, from geospatial data pipeline architecture to decision-support interface design, with a focus on transparency, reproducibility, and practical usability.

Based across Bangkok and Brussels, she works at the intersection of Southeast Asian field intelligence and European research and innovation ecosystems. She has engaged with European climate-tech and policy environments through participation in the 2026 Cleantech Conference in Brussels, the 2025 AOGEOS Symposium, and regional convenings on AI, geospatial intelligence, and climate finance across Bangkok, Helsinki, and Paris.

Her technical expertise includes satellite imagery analysis, Earth observation for environmental monitoring, climate risk indicator development, geospatial AI pipelines, and open decision-support tools. She has applied these capabilities to renewable energy site selection, flood and coastal shift detection, smallholder agriculture intelligence in Thailand, and climate adaptation planning across Southeast Asia.

Suchada was a selected speaker at the Asia-Pacific Regional Commemoration of International Women's Day 2025 (ESCAP/UN Women), presenting on AI innovations for gender equality before an audience of over 600 diplomats, policymakers, and civil society representatives. She is actively building Horizon Europe consortium partnerships to bring Southeast Asia field intelligence and open geospatial methods into European research collaborations.

She is currently positioning Impact Intelligence Lab as a Horizon Europe consortium partner, bringing Southeast Asia field access, open geospatial methods, and AI-powered decision-support capabilities to European research teams. Her motivation is to ensure that climate and disaster risk intelligence is open, reproducible, and usable by the institutions and communities that most need it.

Research Area / Interests (+-10 lines)

Main research fields:

- Climate risk and disaster exposure analysis using Earth observation and reanalysis data (ERA5, Copernicus Sentinel-1/2, MODIS, VIIRS)
- Geospatial vulnerability and adaptive capacity indexing at subnational scale
- AI and machine learning for environmental monitoring and decision support, including land-use classification, crop mapping, and anomaly detection
- Composite risk indices for climate adaptation planning, drawing on IPCC AR6 risk frameworks and open methodologies

- Open decision-support tools and interactive evidence dashboards for non-specialist audiences including planners, funders, and community leaders
- Agrobiodiversity and climate-resilient agriculture in smallholder systems, with field experience in Thailand and the Mekong region
- Blue carbon geospatial intelligence: mangrove extent, coastal ecosystem services, and carbon stock estimation
- Civic and social data intelligence: open government data, SDG indicator monitoring, and participatory data systems

Technological specialization:

- Geospatial AI pipelines combining satellite imagery, vector data, and tabular climate records into reproducible, versionable analysis products
- Open-source stack: Python, GeoPandas, Rasterio, Google Earth Engine, QGIS, PostgreSQL/PostGIS, and web-based visualization using MapLibre GL and Observable Framework
- Focus on methods transparency, documented assumptions, and outputs designed for institutional and public trust

Motivation, Expectation and Plan

I grew up in a rural farming village where climate shocks were not numbers on a chart – they were and still are real life-threatening crises. That pushed me into climate data science and software engineering, and later into founding Impact Intelligence Lab to build climate-intelligence tools. Today, some of the biggest decisions on where to invest in adaptation, how to target early warning systems, and which communities are most at risk are still taken with scattered data and black-box models that people cannot question. Impact Intelligence Lab exists to fix that, by building open, tested tools together with partners on the ground. Horizon Europe is the most serious and well-funded place to do this kind of work, with clear calls on disaster risk and agrobiodiversity at TRL 4–5. Joining this matchmaking event is a practical way to find consortia whose research strengths fit our field access, geospatial skills, and open-methods mindset in Southeast Asia.

Specific goals:

Meet one or two European research or applied science teams working on disaster risk awareness (HORIZON-CL3-2026-01-DRS-01) or boosting agrobiodiversity for food security (HORIZON-CL6-2026-01-BIODIV-06) who are building or joining consortia for the 2026–2027 work programme.

Present Impact Intelligence Lab as the Southeast Asia geospatial and risk-intelligence partner, bringing field access, EO analysis, practitioner networks in Thailand and the Mekong, and open decision-support tools that can reach TRL 4–5 in real environments.

Start MoU or letter-of-intent talks with at least one consortium lead to agree on our role before the 2026 call deadlines.

Concrete follow-up plan:

After the event, we will contact matched partners within five working days, share a one-page overview of the lab and short examples of our work, and aim to define our role in at least one draft proposal within sixty days. We can write and review sections on geospatial methods and field validation, add Southeast Asia context and partner references, and help shape work packages that match our TRL 4–5 strengths. Depending on what each consortium needs, we are open to joining as a full partner or as a focused subcontractor on regional risk analytics and open-source tools.