

PROJECTS CATALOGUE

THE SUSTAINABLE URBANISATION
GLOBAL INITIATIVE (SUGI)
FOOD-WATER-ENERGY NEXUS





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SUGI PROJECTS CATALOGUE

The SUGI Projects Catalogue issued in 2018 provides an overview of the initiative and the 15 projects funded by the call.

The Sustainable Urbanisation Global Initiative (SUGI)/Food Water Energy Nexus initiative provides a unique collaboration framework. The initiative offers opportunities for technical and social scientists, small and large businesses, cities and non-governmental organisations, to tackle the urban challenges of food, energy and water nexus.

This first-of-a-kind cooperation between JPI Urban Europe and the Belmont Forum and supported by the European Commission will see 15 projects develop and test innovative and sustainable approaches within the urban ecosystems around the globe.

The initiative offers an opportunity for funding agencies, policy makers and research and innovation actors to tackle the challenge of urban transitions and to develop connections and collaborations worldwide. SUGI is supported through the ERANET funding mechanism by the European Commission, under Horizon 2020 Societal Challenge 5 Programme.

The catalogue part of the JPI Urban Europe Projects Catalogues series issued annually since 2016.

THE SUGI CALL

The SUGI initiative brings together researchers and stakeholders from all over the globe to develop new knowledge, innovative and integrated solutions and tools to address food, water and energy challenges in urban areas.

The interactions between food, water and energy are of paramount interest to policy, science and the society at large, today and even more so in the upcoming decades. Challenges connected with population increase and food shortages, scarce water and insufficient energy resources demand solutions.

” Bringing knowledge holders together from across the continents allows for sharing lessons learned and best practices and highlights what is scalable and what is region-specific.

The Sustainable Urbanisation Global Initiative (SUGI)/Food-Water-Energy (FWE) Nexus is a joint initiative established by JPI Urban Europe and Belmont Forum to enable research collaboration worldwide. The goal is to rapidly evolve the knowledge base, advance indicators and assessment tools that are needed for a comprehensive understanding of the FWE nexus in urban areas. Global population growth and the expansion of cities in an interconnected world makes international collaboration necessary. Increasing demands for food, water, and energy often exceed the capabilities of any one region.



More on the timeline and budget on page 6.

Call topics addressed

Robust
Knowledge,
Indicators and
Assessments

Multi-level
Governance and
Management

Managing
Strategies
and Solutions

See details about the call topics on jpi-urbaneurope.eu/calls/sugi/

SUGI called for consortia consisting of partners from a minimum of three countries, including actors from city authorities, private business and civil society working together in transdisciplinary research teams including researchers from physical, natural, social sciences and the arts and humanities.

JPI Urban Europe and Belmont Forum expect that a widening of the network of urban researchers and practitioners, creating and testing new concepts and solutions against different urban settings will contribute to urban transitions across the globe.

Timeline and budget

The joint call was issued in December 2016 and a year later in December 2017, 15 projects were awarded. Projects will begin in Spring 2018 and finish in 2021.

The total call budget is 28.5 Euro, the lion part of which is provided by the national funding agencies. However, the European Commission has been actively supporting the SUGI initiative from the very beginning and provides a top-up of an additional 30 % of funding in addition to the funds provided by the countries involved.

Read more about the other JPI Urban Europe calls

All details on former calls you can find on jpi-urbaneurope.eu

Online stakeholder involvement platform

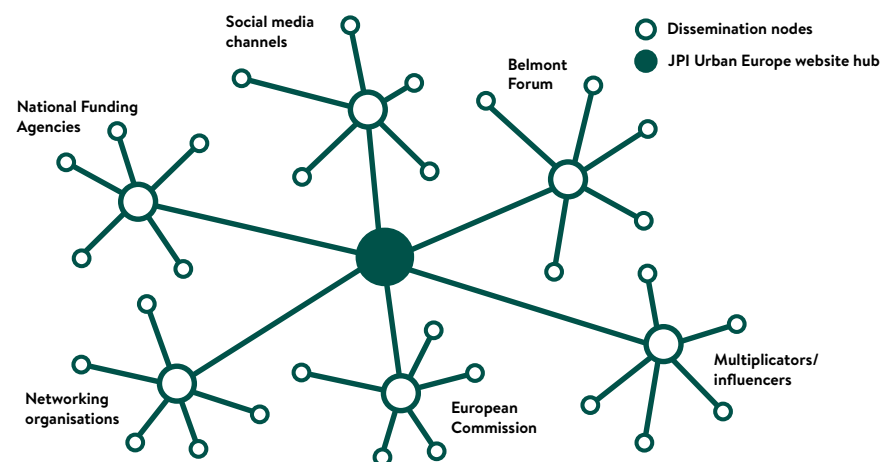
SUGI connect

The initiative offers access to a global network of researchers, practitioners, stakeholders and experts in urban development.

SUGI projects will begin in Spring 2018 and run for three years. From the very beginning we will strive to facilitate an on-going debate, which will include researchers and stakeholders, and to provide results, knowledge and opportunities to get involved via different channels.

SUGI connect is a virtual network of stable dissemination nodes consisting of organisations and networks interested in future food, water and energy solutions in cities that can help facilitate the communication with stakeholders around the globe interested in the outcomes and results from the SUGI research projects.

Everyone can become a part of the SUGI nexus worldwide community and stay in tune with the initiative via the JPI Urban Europe and Belmont Forum websites, newsletters and twitter.



Sign up for the SUGI newsletter via
jpi-urbaneurope.eu

Twitter hashtag
#suginexus

The urban Food-Water-Energy nexus approach

The urban food-water-energy nexus approach focuses on intersections and potential synergies between sectors and fields commonly seen apart in business, policy and research. It is understood that investigations in food, water and energy as one complex system will lead to discoveries that cannot emerge from research on food, water or energy systems separately.

By 2050, the world population is projected to increase to 9 billion and the number of people living in urban areas is expected to double. These trends in population density and movement, coupled with land use change and climate variability will lead to major increases in demand for resources and hold important implications for security and social justice. A key factor in global sustainability is material and energy use in urban areas; land-use transformations; resource-intensive behaviors and consumption; impacts on ecosystem services; and changes driving social and cultural inequities. Many of these processes are common to cities across different regions, but there is also much specificity.

“ To date, we have a limited understanding of the FWE system’s complexity, resilience and thresholds. Investigations of this complex system will produce discoveries that cannot emerge from research on food or water or energy systems alone.

In this context the urban FWE approach offers a framework for developing goals, targets, and solutions that balance trade-offs and maximize synergies between the food, water and energy sectors and helps coordinate action and reduce the risk that progress towards one goal will undermine progress towards another. The approach is devised to counteract wicked issues in urban sustainable development since it specifically describes where governance and socioeconomic policy activities interact with the



resource flows related to food, water, and energy including feedbacks in coupled anthropogenic, biotic, abiotic, and engineered systems.

In addition, the FWE nexus approach can also play a pivotal role in fostering sustainable urbanisation, by proposing potential solutions to govern resource interdependencies through comprehensive spatial perspectives and multi-level governance strategies.

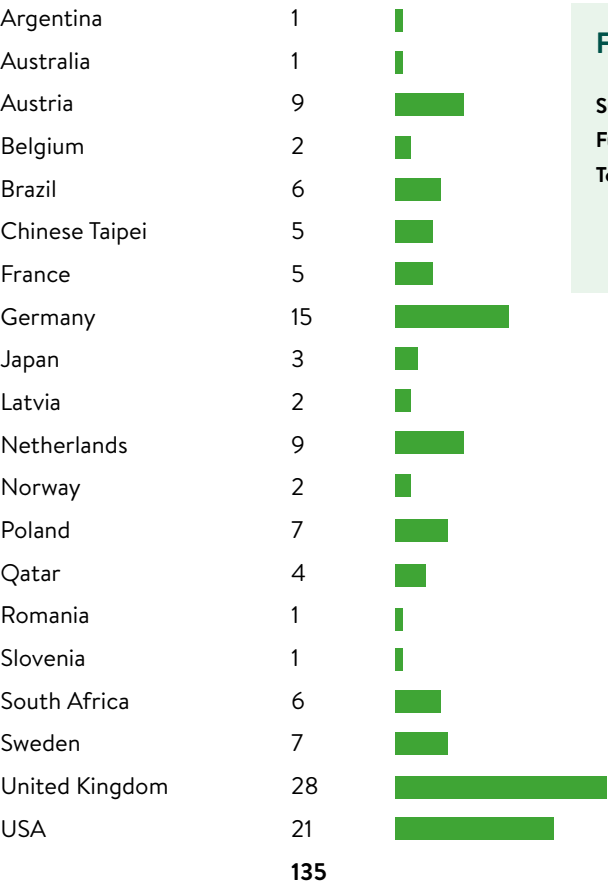
To date, we have a limited understanding of the FWE system’s complexity, resilience and thresholds. Investigations of this complex system will produce discoveries that cannot emerge from research on food or water or energy systems alone.

Statistics

The funded projects include partners from 20 countries in 6 continents.

There is a slight dominance of formal project partners from Europe followed by North America. On a country level UK and USA are the most well represented. Projects include partners from universities, companies, public sector and civil society.

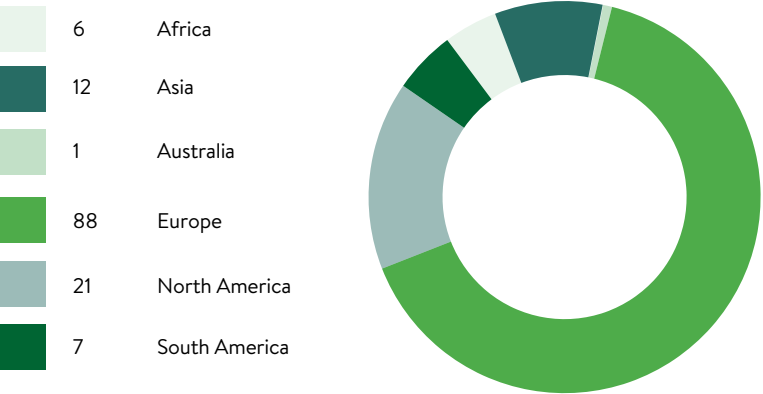
Project partners per country



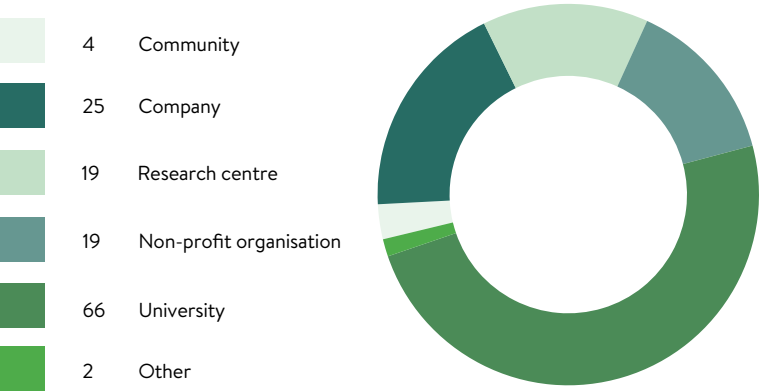
Facts

Submitted proposals: 88
Funded projects: 15
Total budget: 28.5 M€

Project partners per continent



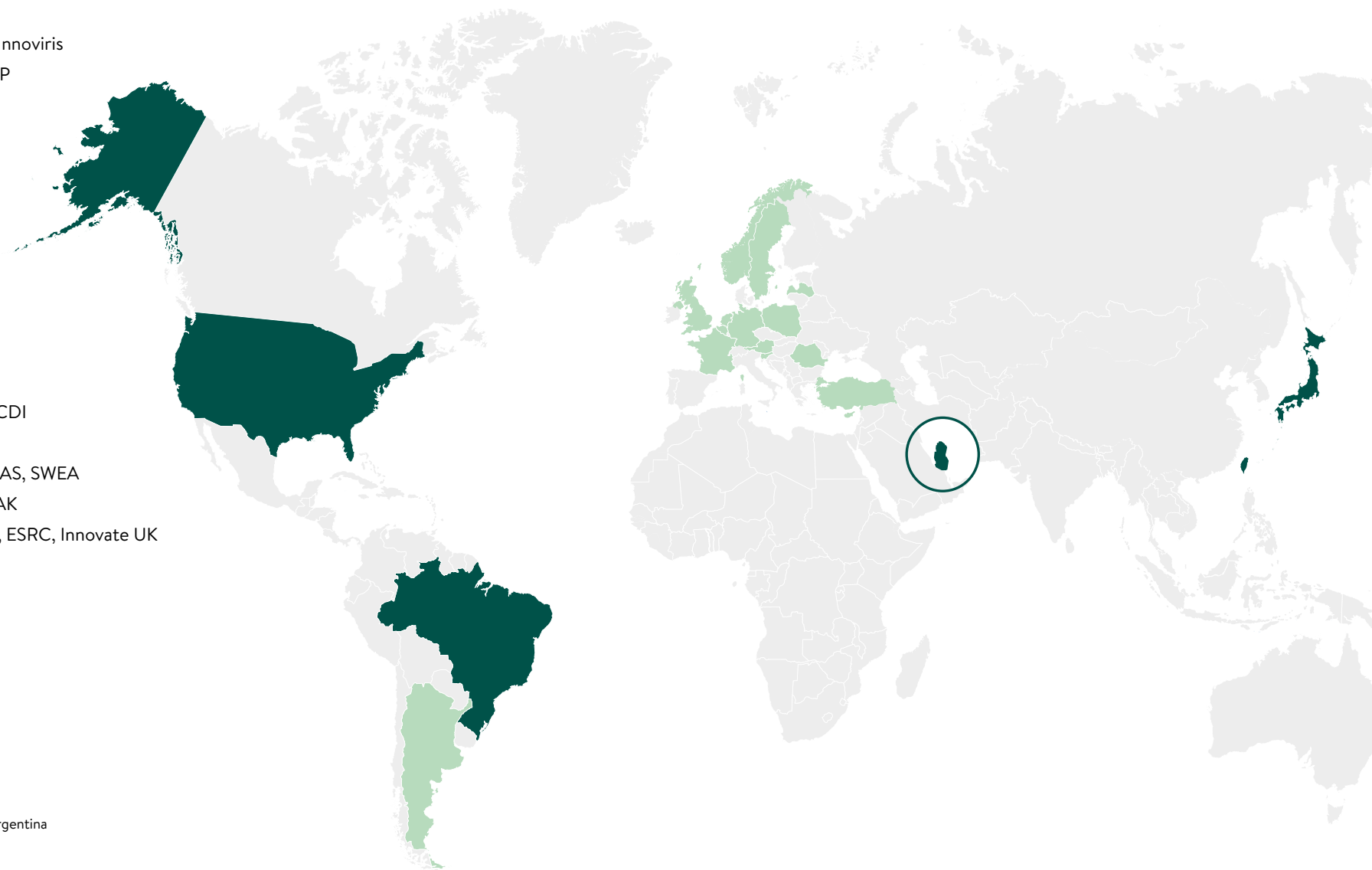
Project partners per type of organisation



National funding agencies

Argentina	MINCyT
Austria	FFG
Belgium	FWO, Innoviris
Brazil	FAPESP
Chinese Taipei	MOST
Cyprus	RPF
France	ANR
Germany	BMBF
Japan	JST
Latvia	VIAA
The Netherlands	NWO
Norway	RCN
Poland	NCN
Qatar	QNRF
Romania	UEFISCDI
Slovenia	ARRS
Sweden	FORMAS, SWEA
Turkey	TUBITAK
United Kingdom	AHRC, ESRC, Innovate UK
USA	NSF
USA/Africa	START

- Belmont Forum agencies
- JPI Urban Europe agencies + Argentina



Projects overview

Topic 1 Robust Knowledge, Indicators and Assessments

Topic 2 Multi-level Governance and Management

Topic 3 Managing Strategies and Solutions

● Environmental Sustainability and resilience

● Urban Governance and Participation

Project	Urban Living Lab	Thematic priority in SRIA*	EU Urban Agenda Theme	SDG	SUGI call Topic 1	SUGI call Topic 2	SUGI call Topic 3
CITYFOOD	●	●	10.9, 10.7, 12.5	11.6	●	●	●
Creating Interfaces	●	●	10.9, 12.1, 12.4	11.6		●	
CRUNCH	●	●	10.7, 12.4, 12.5	11.6	●		
ENLARGE		●	10.7, 10.9	11.6	●		●
FEW-meter		●	10.9, 10.7, 12.5	11.6	●	●	
FUSE	●	●	10.9	11.6	●	●	
GLOCULL	●	●	10.9, 12.1	11.6	●	●	●
IFWEN		●	10.9, 12.1	11.6, 11.3	●		
IN-SOURCE		●	10.9, 12.3	11.6	●	●	
METABOLIC		●	10.5	11.6			●
M-NEX	●	●	10.9, 12.5	11.6		●	
SUNEX		●	10.9, 12.1	11.6	●		●
Urbanising in Place		●	10.9, 10.7, 10.5, 10.6, 12.3, 12.4, 12.5, 12.7	11.3, 11.6		●	
Vertical Green 2.0		●	10.7, 10.9, 12.5	11.6		●	
WASTE FEW ULL	●	●	10.5, 10.7, 10.9, 12.5	11.6		●	

THE PROJECTS

CITYFOOD

Creating Interfaces

CRUNCH

ENLARGE

FEW-meter

FUSE

GLOCULL

IFWEN

IN-SOURCE

METABOLIC

M-NEX

SUNEX

Urbanising in Place

Vertical Green 2.0

WASTE FEW ULL

* JPI Urban Europe Strategic Research and Innovation Agenda, 2015

CITYFOOD

Feeding rapidly growing urban populations requires innovative solutions that ensure efficient water, energy, and nutrients management. CITYFOOD investigates quasi-closed loop integrated aqua-agriculture (IAAC) systems to address this global challenge. IAAC systems produce fish and plants, while re-using the fish water as fertiliser in nearly emission-free facilities. CITYFOOD will develop strategies to further the popularity and application of this space and resource friendly food production system in urban areas. The multidisciplinary project team will involve city planners, urban farmers, scientists, entrepreneurs, community leaders, and engaged citizens to reach its goals.

CITYFOOD – Smart integrated multitrophic city food production systems – a water and energy saving approach for global urbanisation

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/cityfood/

Contact: Prof. Werner Kloas, Dr. Daniela Baganz, Leibniz-Institute of Freshwater Ecology and Inland Fisheries

E-mail: werner.kloas@igb-berlin.de, baganz@igb-berlin.de

Budget: 1.876.956 €

Partners: Forschungsverbund Berlin e.V. – Leibniz Institute of Freshwater Ecology and Inland Fisheries, Norwegian Institute of Bioeconomy Research Division for Food Production and Society, Universidade Estadual Paulista Júlio de Mesquita Filho, University of Gothenburg, Wageningen University & Research, University of Washington

Creating Interfaces

Creating Interfaces will address capacity building for the urban FWE nexus, making the linkages understandable to the stakeholders (government, science, business, and citizens), and facilitating cooperation and knowledge exchange among them. It will develop and test innovative approaches for local knowledge co-creation and participation through Urban Living Labs in three midsize cities on water: Tulcea (Romania), Wilmington (USA) and Slupsk (Poland). Complemented by previous research and a citizen science toolbox, these labs comprise a user-defined co-creative approach where research questions, problems, and solutions are decided and implemented with stakeholders themselves.

Creating Interfaces – Building capacity for integrated governance at the food-water-energy-nexus in cities on the water

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/creating-interfaces/

Contact: Jochen Wendel, European Institute for Energy Research (EIFER)

E-mail: jochen.wendel@eifer.uni-karlsruhe.de

Budget: 1.745.513 €

Partners: European Institute for Energy Research (EIFER), Nicolaus Copernicus University, University Corporation for Atmospheric Research (UCAR), Pracownia Zrownowazonego Rozwoju (PZR), University of Delaware, Danube Delta National Institute for Research and Development (DDNI), 52°North Initiative for Geospatial Open Source Software, Simbiotica, University of Warwick, Plantagon International, KTH Royal Institute of Technology

CRUNCH

The CRUNCH project investigates food, water and energy as one complex system, leading to increased knowledge and discoveries that cannot emerge when investigated separately in ‘silos’. It will combine an integrated decision support system and visualisation models with expert knowledge in waste, food, material flows, water and energy management and urban planning, architecture and urban governance. CRUNCH aims for ground-breaking outcomes that are truly transdisciplinary, working closely with local stakeholders at every step of the project.

CRUNCH: Climate Resilient Urban Nexus Choices: operationalising the Food-Water- Energy Nexus

Duration: 2018–2021

Internet: www.fwe-nexus.eu

Contact: Professor Dr. Steffen Lehmann, University of Portsmouth

E-mail: steffen.lehmann.cities@gmail.com

Budget: 1.503.400 €

Partners: University of Portsmouth, National Taiwan University, KnowNow Information, Eindhoven University of Technology, Expor Micro Technologies, Florida International University FIU, Uppsala University, Glasgow City Council, Gdansk University of Technology, AECOM, Soil Association, Southend-on-Sea Borough Council

ENLARGE

Developing sustainable future cities depends on the opportunities to optimally integrate and mobilize food, water and energy (FWE) resources in a synergistic way to reduce water, carbon, and ecological footprints, and to increase the community resilience against challenges exacerbated by climate change, population growth, and resources depletion. Through modelling of urban development scenarios and the use of decision support tools, we can better understand how community resilience in relation to natural and anthropogenic stresses can be strengthened by the optimal integration of FWE technology hubs at varying scales.

ENLARGE – Enabling large-scale adaptive integration of technology hubs to enhance community resilience through decentralized urban FWE nexus decision support

Duration: 2018–2021

Internet: www.jpi-urbaneurope.eu/enlarge

Contact: Dr. Edo Abraham, Delft University of Technology, Dr. Ni-Bin Chang, University of Central Florida

E-mail: e.abraham@tudelft.nl, nchang@ucf.edu

Budget: 1.072.421 €

Partners: Delft University of Technology, Amsterdam Institute for Advanced Metropolitan Solutions, University of Central Florida, IRSTEA, ECOSEC, ECOFILAE, University of Florida, Florida Solar Energy Center, Southeast Florida Regional Climate Change Compact - Resilient Redesign, Institute for Catastrophic Loss Reduction Miami, National Taiwan University, Taipei City Government, Ecological Sequestration Trust

FEW-meter

As urban agriculture grows worldwide, a key need is to ensure that the nexus of food, energy, and water is optimized to utilise urban resources sustainably. This project will ask farmers to measure the efficiency of urban agriculture case studies in five developed countries by quantifying usage of energy, water and other resources. Data gathered will be used to model the resource flows of urban agriculture. This will enable the identification of methods to improve efficiency, also at a city-scale. An online platform for urban food producers will be created to share knowledge and experience gained within this project and to communicate the methods to increase resource efficiency of urban agriculture.

FEW-meter – an integrative model to measure and improve urban agriculture towards circular urban metabolism

Duration: 2018–2021

Internet: <https://jpi-urbaneurope.eu/project/few-meter/>

Budget: 1.516.738 €

Contact: Lidia Poniży, Adam Mickiewicz University in Poznań

E-mail: lidkap@amu.edu.pl

Partners: Adam Mickiewicz University in Poznań, Poznań University of Life Sciences, City of Gorzów Wlkp, Polish Allotment Gardeners' Association Gorzów Wlkp. Branch, ILS – Research Institute for Regional and Urban Development, School of Architecture, University of Portsmouth, LEAP Micro AD Ltd, Federation of City Farms and Community Gardens, AgroParisTech, IRSTV - CNRS FR2488, The City University of New York, Graduate School of Public Health and Health Policy, University of Michigan, School of Natural Resources and Environment

FUSE

Novel policies and governance forms are needed to address competition for scarce resources in stressed urban food-water-energy systems. FUSE adopts an innovative living lab approach in which stakeholders: 1) produce solutions for future urban-FWE challenges, 2) engage in participatory model building, and 3) examine the merits of proposed solutions. Innovative system models quantify connections and feedbacks among users, producers, distribution mechanisms, and resources. The FUSE approach is being applied to Amman, Jordan and Pune, India: growing urban regions, each with intermittent freshwater supplies and significant competition with agriculture for water and energy.

FUSE – Food-water-energy for Urban Sustainable Environments

Duration: 2018–2021

Internet: fuse.stanford.edu

Contact: Professor Steven Gorelick, Stanford University

E-mail: gorelick@stanford.edu

Budget: 1.850.645 €

Partners: Board of Trustees of the Leland Stanford Junior University, International Institute for Applied Systems Analysis, Helmholtz Centre for Environmental Research (UFZ), Austrian Foundation for Development Research

GLOCULL

Challenges in food, water and energy systems are locally and globally connected. For local actors, including cities, it is difficult to anticipate whether solutions to one issue in the FWE nexus are sustainable across food, water and energy systems, both at the local and the global scale. The GLOCULL project therefore aims to develop an Urban Living Lab approach for innovations in the FWE nexus that are locally and globally sustainable. To support future implementation of this approach, guidelines and a participatory assessment tool kit will be developed through co-creation in seven Urban Living Labs based on an integrated assessment of local-global interactions in the FWE nexus and transdisciplinary action-research.

GLOCULL – Globally and LOcally-sustainable food-water-energy innovation in Urban Living Labs

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/glocull/

Contact: Prof. Dr. Ir. Joop de Kraker, ICIS - Maastricht University

E-mail: j.dekraker@maastrichtuniversity.nl

Budget: 1.939.186 €

Partners: Maastricht University, Lund University, LUCSUS, School of Public Health University of Sao Paulo, University of Natural Resources and Life Sciences Vienna, Arizona State University, Stellenbosch University, Leuphana University of Lüneburg, Bryghuset Finn, Local First Arizona, City of Tempe, Nikko Photovoltaik, City of Phoenix

IFWEN

The trade-offs between food, water and energy can generate unsustainable urbanization pathways, which contribute to socio-economic problems including poverty, conflicts and diseases. However, too little is known about the intersection of FWE in cities. On the other hand, Green and Blue Infrastructure (GBI) has emerged as a viable solution to many urban problems with low cost, sustainable outcomes. Based on empirical research, the project will develop a framework and tools to assess changes in IFWEN, their related trade-offs and the building of innovative capabilities in cities for developing innovative solutions to IFWEN (IFWEN - Innovation in Food-Water-Energy Nexus) and manage GBI at the urban level.

IFWEN – Understanding Innovative Initiatives for Governing Food, Water and Energy Nexus in Cities

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/ifwen/

Contact: Jose A. Puppim de Oliveira, FGV/EAESP

E-mail: jose.puppim@fgv.br

Budget: 1.309.831 €

Partners: Getulio Vargas Foundation (FGV), Sao Paulo School of Management (FGV/EAESP), The Nature of Cities, Ming Chuan University, The Africa Secretariat of ICLEI, The Stockholm Resilience Center, ICLEI, Yale University, UNU-Flores, Ming-Chuan University

IN-SOURCE

As cities across the globe confront rapid change, they face common metabolic challenges to provide Food Water and Energy (FWE) supplies. IN-SOURCE will develop a shared urban data and modeling framework to help decision makers (such as governments, utilities, developers, investors) identify, quantify and visualize FWE systems and their interrelations for urban strategic planning and FWE infrastructure investments. IN-SOURCE is based on three case studies in Ludwigsburg (Germany), New York (US) and Vienna (Austria), and will examine scenarios for an integrated CO₂-neutral and sustainable infrastructure as well as the scalability and transferability of prototype solutions to other cities.

IN-SOURCE

– **INtegrated analysis and modelling for the management of sustainable urban FWE ReSOURCES**

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/in-source/

Contact: Prof. Dr. habil. Ursula Eicker, Hochschule für Technik Stuttgart

E-mail: ursula.eicker@hft-stuttgart.de

Budget: 1.518.657 €

Partners: Hochschule für Technik Stuttgart, New York Institute of Technology, AIT Austrian Institute of Technology, City University of New York, Landkreis Ludwigsburg, Alpen-Adria Universität Klagenfurt, bw-engineers GmbH

METABOLIC

Effective management of urban metabolisms is the key to the health of our urban centers of tomorrow. The project will identify critical factors and define critical pathways of FWE delivery to urban centers using advanced tools such as artificial intelligence, data mining, system dynamics modeling, agro-logistics and scenario analysis to understand the intertwined nature of FWE in terms of lifecycles, including production, processing, delivery, consumption, and disposal. The underlying rationale is that FWE Nexus forms the basis of the urban metabolic system that sustains the development of urban centers. The primary outcome will be the development of the intelligent urban metabolic systems appropriate for cities and the unique challenges for green urban centers of tomorrow.

METABOLIC – Intelligent Urban Metabolic Systems for Green Cities of Tomorrow: an FWE Nexus-based Approach

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/metabolic/

Contact: Distinguished Prof. Fi-John Chang, National Taiwan University

E-mail: changfj@ntu.edu.tw

Budget: 1.516.738 €

Partners: National Taiwan University, Research Institute for Humanity and Nature, University of Illinois, Qatar University, University of Sao Paulo, Sunny Rich Power Co.

M-NEX

Urban communities are particularly vulnerable to the future demand of food, water and energy, and this is further exacerbated by the onset of climate change. A solution needs to be found for a FEW nexus. This internationally diverse project, based around urban design practice, sees urban agriculture as a key facilitator of the Nexus, needing water and energy to become productive. Working directly with living labs in some of the most vulnerable communities in the partner cities, the team aims to co-design new food futures with stakeholders that leave them less vulnerable to forces disturbing the nexus. The lessons learned from these stakeholder workshops will be shared outside the team, so that lessons learned locally can be applied globally.

The Moveable NEXUS: Design-led urban food, water and energy management innovation in new boundary conditions of change

Duration: 2018–2020

Internet: mnex.sfc.keio.ac.jp

Contact: Wanglin Yan, Keio University

E-mail: yan@sfc.keio.ac.jp

Budget: 1.670.883 €

Partners: Keio University, Delft University of Technology, Queens University Belfast, Institute for Global Environmental Strategies, Qatar University, Maccleanor Lavington, University of Technology Sydney, University of Michigan

SUNEX

SUNEX provides an integrated modelling framework of advanced tools to model and assess the Food-Water-Energy (FWE) systems' demand and supply sides, capture their interdependencies and maximize synergies through a nexus view that endorses efficient solutions for energy, water and food supply for urban regions. The approach will be applied in four case study cities reflecting different socio-economic and climate characteristics, different consumption patterns and different local and remote FWE resource shares. A monitoring and control sensor network will be tested to improve water and energy savings for local food production. The results will feed into FWE-supply guidelines ensuring replication to support the transition towards higher urban resilience.

SUNEX (Sustainable Urban FWE Nexus) – Formulating sustainable urban FWE strategy by optimizing the synergies between food, water and energy systems

Duration: 2018–2021

Internet: www.jpi-urbaneurope.eu/project/sunex/

Contact: Dr. Wolfgang Loibl and Dr. Ali Hainoun, AIT Austrian Institute of Technology

E-mail: wolfgang.loibl@ait.ac.at, ali.hainoun@ait.ac.at

Budget: 1.476.383 €

Partners: AIT Austrian Institute of Technology, Leibniz Centre for Agricultural Landscape Research (ZALF), University of the West of England, Bristol Water, Qatar Environment and Energy Research Institute, Qatar Ministry for Municipality and Environment, ROC Connect

Urbanising in Place

Farmers and food growers can play a role in managing the urban food-water-energy nexus. Process of urbanization today disable the metabolic agency of urban food growers. This projects seeks to define components of an “agroecological urbanism”: a model of urbanisation which places food, metabolic cycles and an ethics of land stewardship, equality and solidarity at its core. Working with communities of practice in Rosario, Riga, Brussels and London, the project will identify ways of structuring urbanization that value proximity, account for the reproduction of nutrients and soils, mobilize technologies and decommodified value chains in order to keep the control over resources localised.

Urbanising in Place – Building the Food-Water-Energy Nexus from Below

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/urbanising-in-place/

Contact: Prof. Michiel Dehaene, Ghent University

E-mail: michiel.dehaene@ugent.be

Budget: 1.124.416 €

Partners: Ghent University, Coventry University, Art Academy of Latvia, Sampling, URBEM, Architecture Workroom Brussels, Universidad Nacional de Rosario and CONICET, Wageningen University, Quantum Waste Ltd, University of Sheffield, Shared Assets

Vertical Green 2.0

Vertical green (VG) has a great potential to cool buildings, to recycle and upcycle wastes, rainwater and grey water, to produce food or bio-energy and to generate green spaces nearly everywhere in cities - almost independent of available horizontal space. The project approach the different chances and challenges associated with VG together with citizens affecting or being affected by it in order to maximize VG's acceptance. We will re-develop VG according to stakeholder needs, e.g. we will adapt it to different architectures, different climates and reduce maintenance costs through automated machinery so that VG may unfold its full positive impacts to as many urban neighbourhoods as possible.

Vertical Green 2.0 – Vertical greening for liveable cities

– co-create innovation for the breakthrough of an old concept

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/vertical-green-2-0/

Contact: Dr. Thomas Nehls, Technische Universität Berlin

E-mail: thomas.nehls@tu-berlin.de

Budget: 1.351.601 €

Partners: Technische Universität Berlin, National Taiwan University, Urban planning institute of the Republic of Slovenia, University of Natural Resources and Life Sciences Vienna, Green4Cities Vienna

WASTE FEW ULL

WASTE FEW ULL will map and substantially reduce waste in the food-energy-water nexus in cities across three continents: Europe, Africa and South America. It will establish four Urban Living Labs (ULLs) of stakeholders to a) map resource flows b) identify critical dysfunctional linear pathways c) agree the response most appropriate to the local context d) model the market and non-market economic value of each intervention and e) engage with decision makers to close each loop. The project will contribute with policy decision support models for economically viable waste reduction, rethinking waste as a resource as well as establish entrepreneurship networks in each ULL to continue working after the formal end of the project.

WASTE FEW ULL – Waste Food-Energy-Water Urban Living Labs

– Mapping and Reducing Waste in the Food-Energy-Water Nexus

Duration: 2018–2021

Internet: jpi-urbaneurope.eu/project/waste-few-ull/

Contact: Professor Susanne Charlesworth, Coventry University

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Budget: 1.153.558 €

Partners: Coventry University, University of California, CICERO Senter for klimaforskning, University of Bath, University of Reading, Wessex Water Services, Bristol Food Network, GENeco, The Schumacher Institute, University of Campinas, University of Cape Town, Erasmus University Rotterdam, ERWAT, Isidima Design & Development, BlueCity

NB: All budget figures given in this brochure are preliminary figures based on the submitted proposals or closed contracts but not on audited cost statements. Financial figures presented in the catalogue may be subject to change.

Belmont Forum

The Belmont Forum is a group of the world's major and emerging funders of global environmental change research. It aims to accelerate delivery of the environmental research needed to remove critical barriers to sustainability by aligning and mobilizing international resources. The Belmont Forum pursues the goals set in the Belmont Challenge by adding value to existing national investments and supporting international partnerships in interdisciplinary and transdisciplinary scientific endeavors.

www.belmontforum.org



JPI Urban Europe

Joint Programming Initiative Urban Europe was created in 2010 with the ambition to develop a European research and innovation hub on urban matters and create European solutions by means of coordinated research. The aim is to create attractive, sustainable and economically viable urban areas, in which European citizens, communities and their surroundings can thrive.

www.jpi-urbaneurope.eu



CONTACT US

The SUGI initiative is operated on a daily basis by an international management team. Many operational issues are dealt by national funding agency contact points.

Coordination and public relations

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National funding agencies

Contact information to all national funding agencies involved in SUGI and their contact persons are available at

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The Sustainable Urbanisation Global Initiative (SUGI)/ Food-Water-Energy Nexus initiative was set up as joint effort between JPI Urban Europe and Belmont Forum to provide a unique collaboration framework for technical and social scientists, small and large businesses, cities and non-governmental organisations across the globe, to tackle the urban challenges of food, energy and water nexus. Projects funded in the call will develop new knowledge, innovative and integrated solutions and tools.

This Projects Catalogue provides an overview of the SUGI initiative and the 15 projects funded by the call.



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