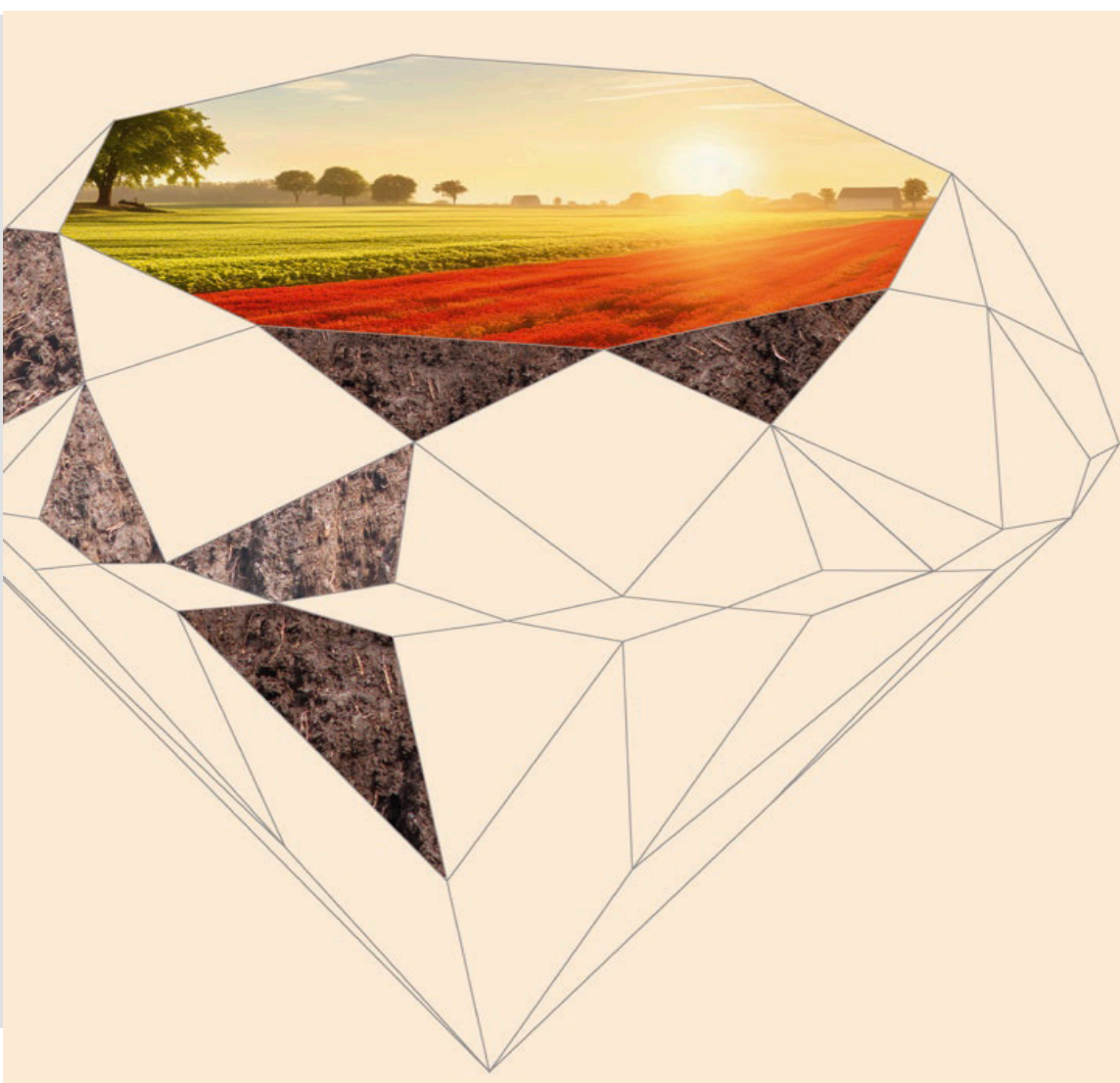


## 5<sup>th</sup> Waseda Brussels Conference

Global Sustainable Food Supply

Wednesday Decembre 13<sup>th</sup> 2023

University Foundation, Room Félicien Cattier, Egmont Street, 11 - 1000 Brussels





## Global Sustainable Food Supply

The Moonshot R&D Program conducted by the Cabinet Office in Japan is pursuing disruptive innovations in Japan and promoting challenging R&D based on revolutionary concepts. The program's research aims to achieve nine ambitious Moonshot Goals.

The Moonshot Goal 5 is pursuing Creation of industry that enables sustainable global food supply by exploiting unused biological resources by 2050. The global demand for food is estimated to increase 70% by 2050. Since excessive focus on production efficiency would hamper the cyclical function of the earth, it is essential to establish a food production system friendly to the global environment while increasing the food supply. Moonshot Goal 5 aims to address the issue with eight R&D projects, which are promoted by the Bio-oriented Technology Research Advancement Institution.

With the formation of agrarian societies, humankind has acquired a stable method of sustainable food supply. However, with the dramatic expansion of human activities in recent years, the sustainable supply of food, which is an indispensable part of human existence, is facing critical challenges. Finding solutions to these challenges is not only a great responsibility we have for the future of food security, but also an unprecedented global-scale challenge which must be approached with a clear vision as well as through a design approach by thinking outside the box.

Within the Moonshot program, five projects have already been launched in the theme of "Food Production Systems Achieving Both Food Supply Expansion and Global Environment Conservation," and two in the theme of "Food Consumption Systems Realizing Zero Food-loss and Waste" to realize the future vision shown in the figure hereafter.

On the other hand, in Europe, the Soil Deal for Europe of 100 living labs and lighthouses to lead the transition towards healthy soils is progressing in Horizon Europe's Mission. The 8 Mission objectives consists of: 1) Reduce desertification; 2) Conserve soil organic carbon stocks; 3) Stop soil sealing and increase re-use of urban soils; 4) Reduce soil pollution and enhance restoration; 5) Prevent erosion; 6) Improve soil structure to enhance soil biodiversity; 7) Reduce the EU global footprint on soils; 8) Improve soil literacy in society.

There are clear areas of convergence between the research and development programs in Europe and Japan. This is an excellent opportunity to present the latest ideas and discuss future activities with European and Japanese researchers in relation to the «A Soil Deal for Europe» and «Moonshot Goal 5» programs.

This Symposium is undertaken in the framework of Moonshot Goal 5 research program and sponsored by the Waseda University Brussels Office. It covers a wide range of research areas aimed at producing a sustainable global food supply and consumption, with respect to the natural environment.

Participants will deduce from scientific data how to understand, conserve and use not only agricultural soils but also various environments. Participants will exchange and discuss their research on big data analysis of multi-level environmental parameters (biological, physical and chemical) obtained using state-of-the-art technologies. The aim is to share a vision for environmental conservation and use based on these research results. In particular, the symposium will be a starting point for the creation of a global network of research areas. In addition to scientific discussions, the symposium will seek, through dialogue with experts and policy makers, to develop international research collaboration by looking for opportunities for correspondence between the Japanese Moonshot program and the EU's Horizon Europe program.



08:30 - 09:00	Registration & Welcoming Coffee
09:00 - 09:20	<p>Welcome words</p> <p>Chair: <b>Jean-Louis Moortgat</b> (Waseda University Brussels Office)</p> <p><b>Masahiko Gemma</b> Vice President for International Affairs &amp; International Fundraising, Waseda University</p> <p><b>Anne Weyembergh</b> Vice Rector for External Relations &amp; Cooperation, ULB</p> <p><b>H.E. Yasushi Yamamoto</b> Ambassador, Deputy Head of Mission, the Mission of Japan to the European Union</p> <p><b>Mr. Jean-Eric Paquet</b> - <i>Video message</i> EU Ambassador to Japan, Delegation of the European Union to Japan</p>

#### KEYNOTES - GLOBAL SUSTAINABLE FOOD SUPPLY

09:20 - 10:15	<p>Chair: <b>Haruko Takeyama</b> (Waseda University)</p> <p><i>Ensuring the Sustainability of the Global Food Supply.</i> by <b>Kazuhiro Chiba</b> (Tokyo University of Agriculture and Technology) <i>A Soil Deal for Europe.</i> by <b>Luis Sanchez Alvarez</b> (Soil Mission, DG AGRI Unit F2)</p>
10:15 - 10:30	Coffee break

#### SESSION I - SOIL HEALTH AND CROP SCIENCE

10:30 - 12:00	<p>Chair: <b>Ute Weisz</b> (Technical University of Munich)</p> <p><i>Constructing a Sustainable Future: Advancing Crop Production through Soil-Microbe Synergy in Japan's Moonshot Soil Project.</i> by <b>Haruko Takeyama</b> (Waseda University)</p> <p><i>Soybean cultivation with a little help from the microbial friends.</i> by <b>Sofie Goormachtig</b> (Ghent University)</p> <p><i>Soil conditions affect expression profiles of genes involving plant-soil communication.</i> by <b>Minami Matsui</b> (RIKEN, Yokohama City University)</p> <p><i>The genetic modification of isoflavones accumulation in lateral roots and its effects on soybean agronomic trait.</i> by <b>Toyoaki Anai</b> (Kyushu University)</p> <p><i>Promises of the soil microbiome: what we can currently achieve through the understanding and management of soil microbial ecology.</i> by <b>Edoardo Puglisi</b> (Università Cattolica del Sacro Cuore)</p>
12:00 - 13:00	Networking Lunch



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**SESSION II - CARBON FARMING**

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13:00 - 14:00

Chair: **Satoru Shimokawa** (Waseda University)

*Carbon farming and decarbonisation of the agricultural sector, an opportunity to bring sustainable agronomic management to the forefront?*

by **Stefano Amaducci** (Università Cattolica del Sacro Cuore)

*The roadmap towards a fully operating Soil Carbon International Research Consortium.*

by **Suzanne Reynders** (INRAE)

*Development of next-generation cultivation systems and measurement technologies for carbon neutrality.*

by **Satoshi Wada** (RIKEN)

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**SESSION III - FOOD INNOVATION, FOOD SUSTAINABILITY, AND TRADING**

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14:00 - 15:45

Chair: **Sofie Goormachtig** (Ghent University)

*Development of Insect-Based Food Production Systems for Global Food Sustainability.*

by **Kei Yura** (Ochanomizu University)

*Transforming Food Systems through Innovations: NewFoodSystems Initiative.*

by **Ute Weisz** (Technical University of Munich)

*Do consumers respond differently to food labels for meat and meat substitutes?*

by **Satoru Shimokawa** (Waseda University)

*Internet Celebrities, Public Opinions and Food System Change in China: A New Conceptual Framework.*

by **Yu Xiaohua** (University of Göttingen)

*Toward development of agricultural digital twin.*

by **Yasunori Ichihashi** (RIKEN)

*New Plant Engineering Techniques, R&D Investment, and International Trade.*

by **Anne-Célia Disdier** (INRAE)

*Reducing salt intake by naturally brewed soy sauce.*

by **Takuya Sato** (Kikkoman Europe)

15:45 - 16:00

Coffee break



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**PANEL SESSION - NEW ERA OF GLOBAL SUSTAINABLE FOOD SUPPLY**

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16:00 - 17:15	Chair: <b>Haruko Takeyama</b> (Waseda University) <b>Kazuhiro Chiba</b> (Tokyo University of Agriculture and Technology) <b>Satoru Shimokawa</b> (Waseda University) <b>Edoardo Puglisi</b> (Università Cattolica del Sacro Cuore) <b>Luis Sanchez Alvarez</b> (Soil Mission DG AGRI Unit F2) <b>Tetsuya Uetake</b> (Mission of Japan to the European Union)
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17:15 - 17:30	Panel discussion and Q&A
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**CONCLUDING WORDS**

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17:30 - 17:45	<b>Haruko Takeyama</b> (Waseda University)
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17:45 - 19:00	Closing Reception
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