

**Presentation at the Stellenbosch University
the Republic of South Africa
Aug. 14, 2023**



**Department of International Affairs
SATREPS Group**

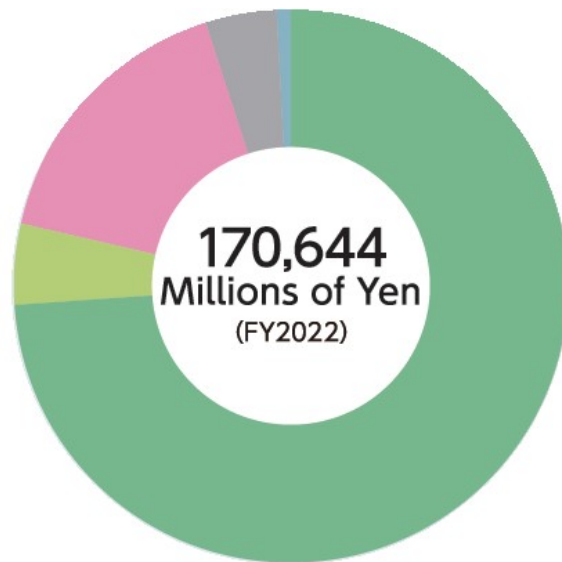
JST in a nutshell

Japan Science and Technology Agency (JST) plays a central role in Japan's "Science, Technology and Innovation (STI) Basic Plan", and promotes STI to provide solutions for the sustainable development of society, JST comprehensively implements diverse projects in collaboration with universities, research institutions, and industries in Japan and overseas.



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■ Initial Budget (1.2 billion USD※)



Funding programs 74.0%

As a network-based research institute, JST promotes research and development leading to innovation and address economic & social issues throughout the implementation of research results and International joint researches.

- Strategic Basic Research
- International Collaborations
- Industry-Academia Collaboration and Technology Transfer

Public engagement 16.5%

Promoting dialogue with various stakeholders toward co-creation of a future society. JST also fosters next generations talents in the fields of S&T as well as human resources who can contribute to S&T innovation.

- Promotion of "Science in/for Society"
- Fostering the Next Generation Human Resources
- Miraikan

R&D strategy planning 0.8%

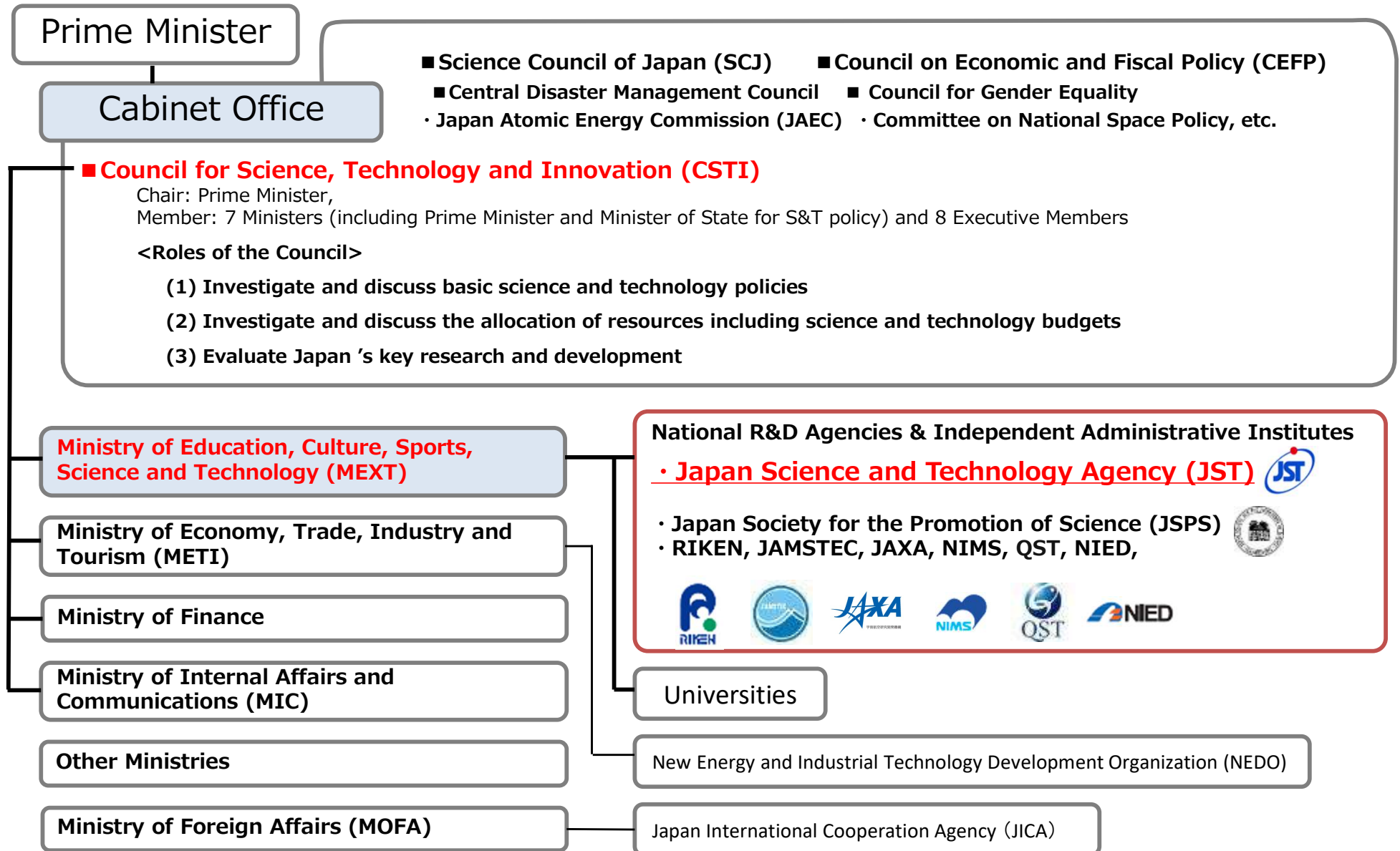
Throughout dialogue with stakeholders and data analysis, JST formulates R&D strategies toward the future.

Information platform and database services, etc. 4.7%

Other programs 4.0%

※ 1 USD ≒ 142 Yen

Japan's STI Administration



JST's International Programs

- **SATREPS** Science and Technology Research Partnership for Sustainable Development (2008 ~)
- **SICORP** Strategic International Collaborative Research Program (2009 ~)
 - Bilateral type
Bilateral collaboration with Sweden, Germany, France, Brazil, etc.
CHIRP (Collaboration Hubs for International Research Program)
 - Multilateral type
e-ASIA JRP / EIG CONCERT Japan / Belmont Forum / STAND / V4 / **AJ-CORE**
- **SAKURA SCIENCE** Sakura Science Exchange Program (2016 ~)
- **J-RAPID** Japanese Grants for Rapid Response Research
- **ASPIRE** Adopting Sustainable Partnerships for Innovative Research Ecosystem (2023~)

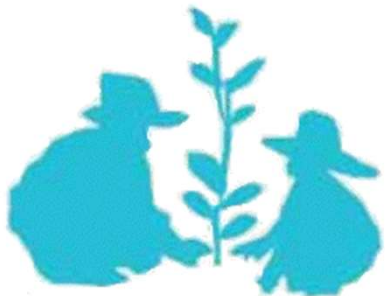




SATREPS

Science And Technology REsearch Partnership for Sustainable Development

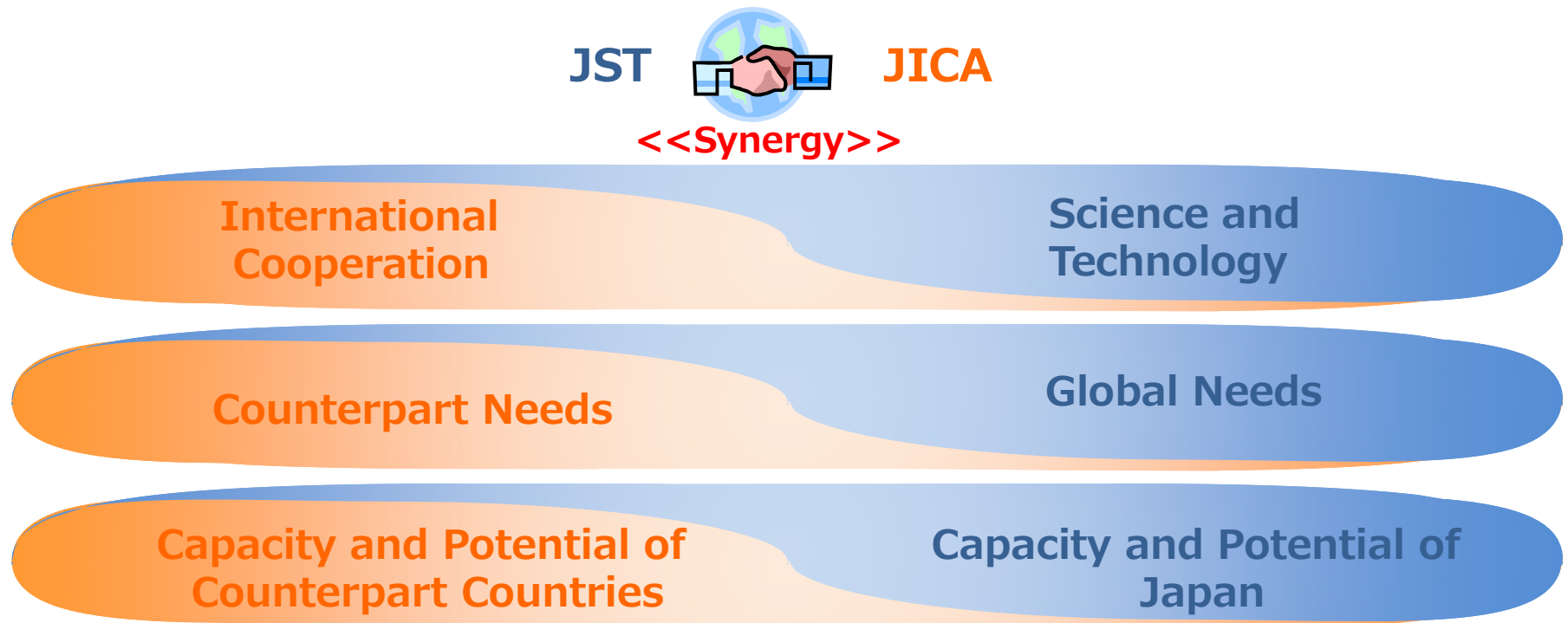
**For the Earth,
For the Next Generation**



Features of SATREPS

SATREPS is a program that aims for a synergistic effect through the collaborative promotion of JST and JICA activities that have been undertaken individually.

It is a part of Japan's "science and technology diplomacy" collaboratively pursued by the science and technology sector and the diplomatic sector to promote mutual development, and it started from 2008.



Aims of SATREPS

~Expecting outcomes to make a real contribution to society ~

Utilize Research Outcomes

1. Enhancing International Cooperation in S & T

~Building win-win relationships between Japan and counterpart countries~

2. Addressing Global Issues and Advancing S & T

~ Addressing global issues and advancing science ~

3. Capacity Development

~ Boosting self-reliant R&D capacity and sustainable research systems, training human resources and coordinating networking between researchers ~

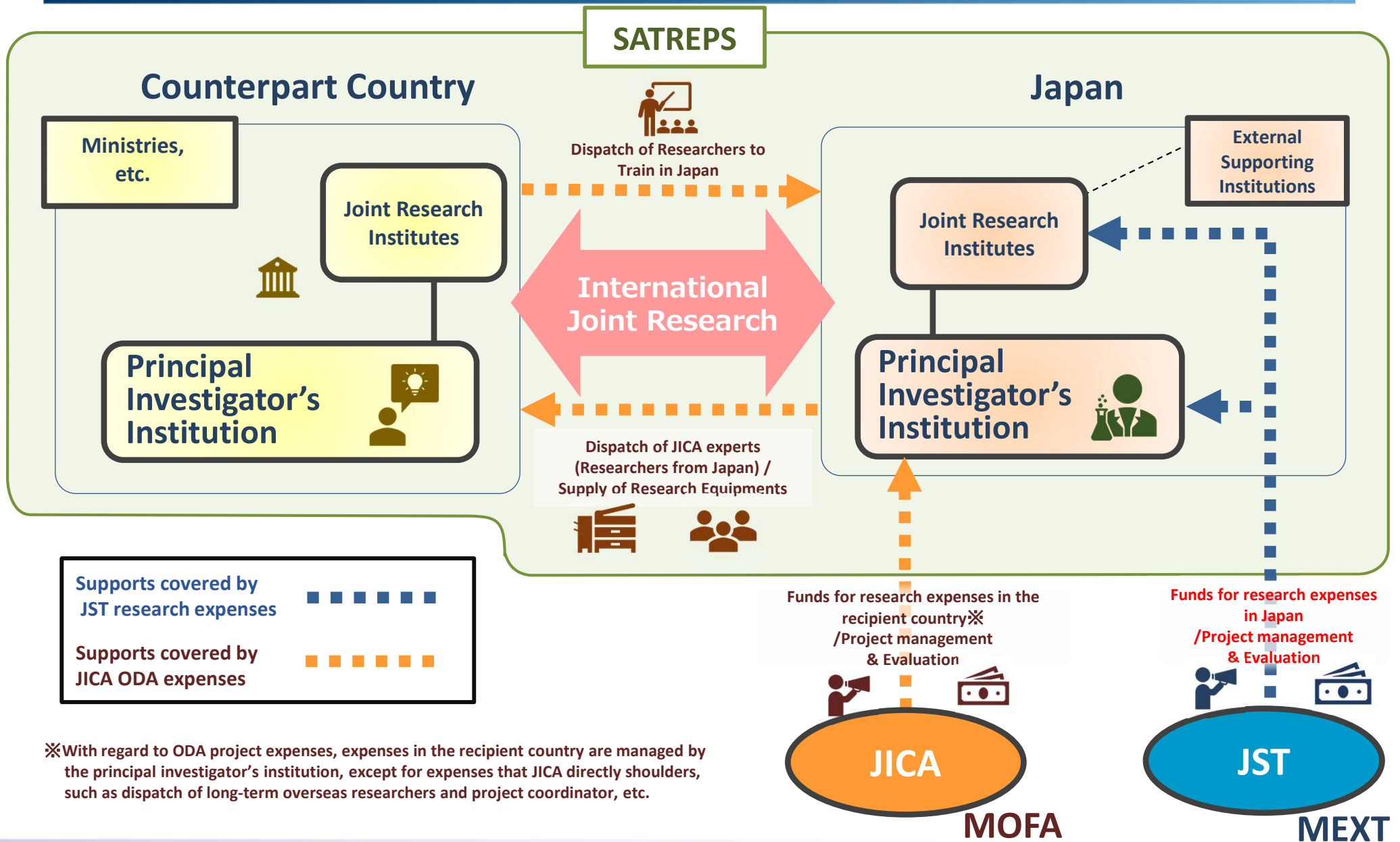
Research Fields, Period, Budget

Fields	Areas	Period	Budget			
Environment and Energy	Research contributing to the solution to global-scale environmental issues	3~5 years (after provisional period*)	Approx. 100 million yen/ project/year			
	Research on the sustainable use of resources and energy with a view to achieving carbon neutrality		<table border="1"> <tr> <td>JST (Research expenses, including indirect costs)</td> <td>Approx. 35 million yen per year (Max. 175 million yen over 5 years, including provisional period*)</td> </tr> <tr> <td>JICA (ODA project expenses under the technical cooperation framework)</td> <td>60~70 million yen per year (Max. 300~350 million yen over 5 years depended on indirect costs)</td> </tr> </table>	JST (Research expenses, including indirect costs)	Approx. 35 million yen per year (Max. 175 million yen over 5 years, including provisional period*)	JICA (ODA project expenses under the technical cooperation framework)
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JICA (ODA project expenses under the technical cooperation framework)	60~70 million yen per year (Max. 300~350 million yen over 5 years depended on indirect costs)					
Bioresources	Research contributing to sustainable production and utilization of bioresources					
Disaster Prevention and Mitigation	Research on disaster prevention and mitigation towards social sustainability					

*The provisional period is the period before the R/D and CRA are signed and the project officially starts.

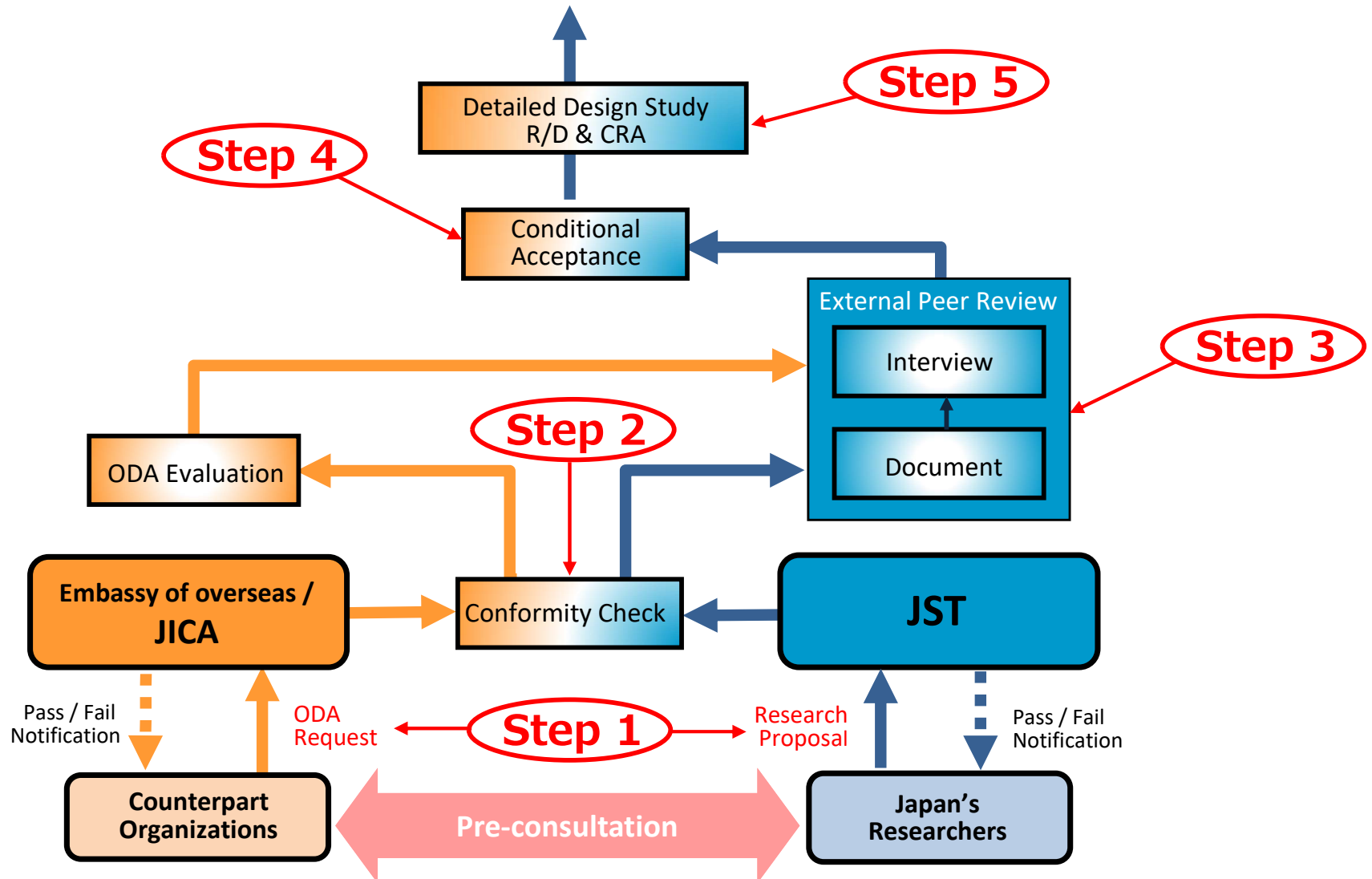
Examples of expenditures not to be supported by JICA are labor costs of the researchers, rent and utility cost of project office, transportation and travel fees for domestic conference, etc.

Program Structure



Selection Process for Start

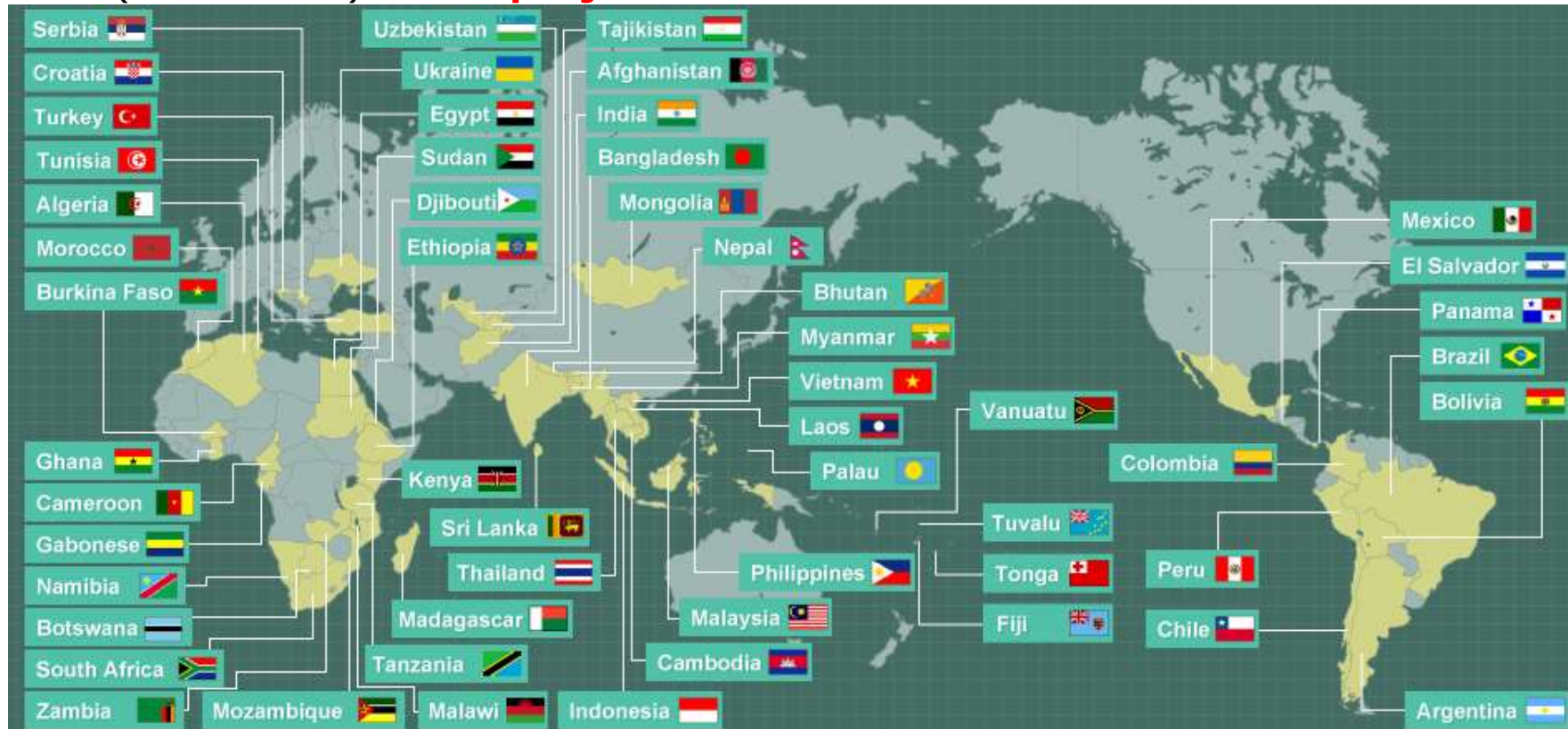
Officially the joint-research start



Statistics

As of May 2023.

In total (since 2008) : **174 projects** with **55 countries***



Area	Number of eligible countries	Number of projects
Asia	14 countries	95 projects
Africa	20 countries	41 projects
Latin America, other	21 countries	38 projects

* Research projects in the field of infectious diseases adopted by AMED (Japan Agency for Medical Research and Development) after FY2015 are not included.

Projects with South Africa



Title	PI(J)	Institutions(J)	PI(S)	Institutions(S)	Period
Development of New Ammonia Synthesis System using Renewable Energy and Hydrogen	Dr. AIKA Ken -ichi	Numazu College (KOSEN), etc	Dr. Dmitri Bessarabov	North-West Univ.	2021 -
Development of a Carbon Recycling System toward a Decarbonised Society by using Mineral Carbonation	Dr. IIZUKA Atsushi	Tohoku Univ., etc.	Dr. Tunde Victor Ojumu	Cape Peninsula Univ., etc.	2020 -
Production of Biofuels Using Algal Biomass	Dr. KANDA Hideki	Nagoya Univ., etc.	Dr. Faizal Bux	Durban Univ. of Technology, etc.	2015 -2020
Establishment of an Early-warning System for Infectious Diseases in Southern Africa Incorporating Climate Predictions	Dr. MINAKAWA Noboru	Nagasaki Univ., etc.	Dr. Neville Sweijd	ACCESS, etc.	2013 -2018
Observational Studies in South African Mines to Mitigate Seismic Risks	Dr. OGASAWARA Hiroshi	Ritsumeikan Univ., etc	Dr. Raymond J Durrheim	CSIR, etc.	2009 -2014
Prediction of Climate Variations and its Application in the Southern African Region	Dr. YAMAGATA Toshio	JAMSTEC, etc	Dr. Neville SWEIJD	ACCESS, etc.	2009 -2012

AJ-CORE



Africa-Japan Collaborative Research (AJ-CORE) is partnership between Africa and Japan contributing to realize the 2030 Agenda for Sustainable Development Goals (SDGs) through Science, Technology and Innovation (STI)

- ✓ **AJ-CORE is a multilateral research framework connecting three (or more) countries: Japan, South Africa, and at least one African country*.**
- ✓ **Japanese teams will be supported by JST, and South African teams by the National Research Foundation (NRF).**
- ✓ **Researchers from other African countries will cooperate on an equal-partnership basis with those from Japan and South Africa, together contributing to issues of local and global significance. Alongside natural scientists the consortium encourages participation by a variety of stakeholders including social scientists, enterprises, NGOs and citizens, with an aim to make research outcomes relevant for wider society.**



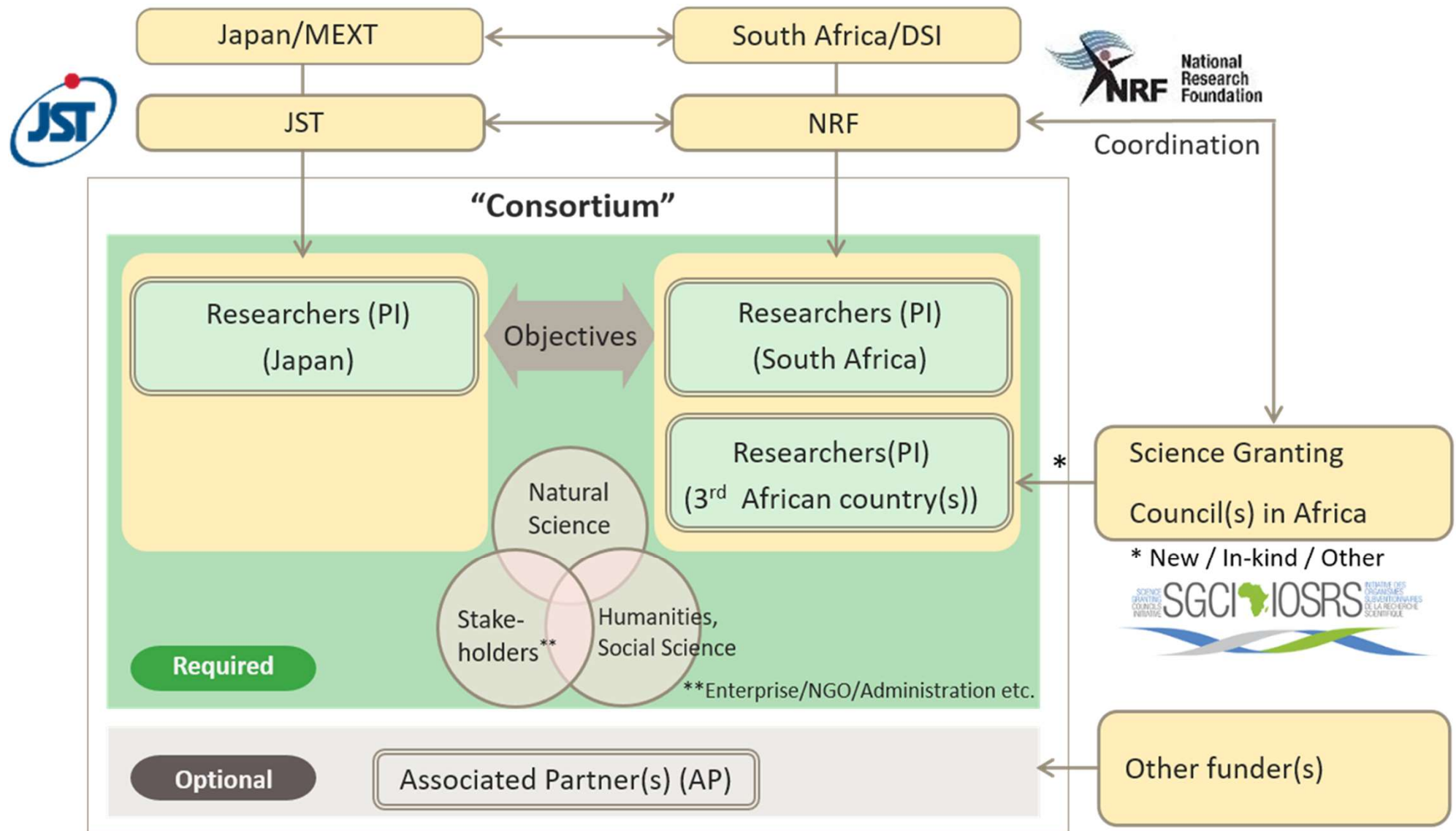
※Participating countries to Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa
17 countries, 18 Organizations (as of Jul. 2023)

Eastern Africa : Ethiopia, Kenya, Rwanda, Tanzania, Uganda

Southern Africa : Botswana, Malawi, Mozambique, Namibia, Zambia, Zimbabwe

Western Africa : Burkina Faso, Cote d'Ivoire, Ghana, Nigeria, Senegal, Sierra Leone

AJ-CORE's Funding Mechanism



AJ-CORE - Joint Call for Proposals -

	1st Joint Call for Proposals	2nd Joint Call for Proposals	3rd Joint Call for Proposals
Field	Environmental Science	Environmental Science	Environmental Science
Call Period	December 2019 ~ March → May 2020	July 2021 ~ October 2021	April 2023 ~ July 2023
Budgets Supported by each countries (per project per year)	<ul style="list-style-type: none"> •54,500 USD by JST and 57,995 USD by NRF •14,000 USD by DFRSDT of Senegal •16,666 USD by FONRID of Burkina Faso (if their researchers are involved in the successfully selected joint projects) 	<ul style="list-style-type: none"> •54,500 USD by JST and 40,500 USD by NRF •29,600 USD by DRST of Botswana (if their researchers are involved in the successfully selected joint projects) 	<ul style="list-style-type: none"> •18 mil. JPY by JST of Japan (up to five - six projects) •R 1.8 mil. by NRF of South Africa (up to six projects) •P 1 mil. by DRST of Botswana (up to three projects) •45,000 USD by NRF of Kenya (up to two projects) •100,000 USD by FNI of Mozambique (up to three projects) •100,000 USD by MTHE of Sierra Leone (up to two projects) (if their researchers are involved in the successfully selected joint projects)
Duration	April 2021 ~ March 2024 (3 years)	April 2022 ~ March 2025 (3 years)	February 2024 - January 2027
Participants	JST(Japan), NRF(South Africa), and Science Granting Councils Initiative. Burkina Faso and Senegal declared their funding for the 1st call.	JST(Japan), NRF(South Africa), and Science Granting Councils Initiative. Botswana has declared their funding for the 2nd call.	JST(Japan), NRF(South Africa), and Science Granting Councils Initiative. Botswana, Kenya, Mozambique and Sierra Leone declared their funding for the 3rd call.
Number of supported	4 projects	4 projects	in the process of selection

Thank you for your attention

For more information

- JST website
<http://www.jst.go.jp/EN/index.html>
- SATREPS website
<https://www.jst.go.jp/global/english/index.html>
- Inquiries regarding ODA technical cooperation
Office for Science, Technology and Innovation, and Digital Transformation,
Japan International Cooperation Agency (JICA)
E-mail : : gpgsd@jica.go.jp
- SICORP (AJ-CORE)
https://www.jst.go.jp/inter/english/program_e/multilateral_e/aj-core.html

Appendix 1/2

(AJ-CORE - Supported Projects FY2021~2023-)

Title	Research Leader in Japan, Research Leaders in the Overseas
Field and mechanism-based toxicity research on pesticides in Africa	ISHIZUKA Mayumi, Professor, Faculty of Veterinary Medicine, Hokkaido University (South Africa) Victor Wepener, Professor, School of Biological Sciences, North-West University (Ghana) Osei Akoto, Lecturer, College of Science, Kwame Nkrumah University of Science and Technology (Zambia) John YABE, Lecturer, Samora Machel School of Veterinary Medicine, University of Zambia
Assessing the Lake Kariba Catchment Environment for Sustainable Water, Energy, Livelihoods and Ecosystem health	UCHIDA Yoshitaka, Associate Professor, Research Faculty of Agriculture, Hokkaido University (South Africa) Luke Chimuka, Professor, Department of Chemistry, University of the Witwatersrand (Zambia) Imasiku Nyambe, Professor, Department of Geology, University of Zambia
Food and Livelihood Resilience from Neglected and Underutilized Plant Species in Western Africa	Alexandros GASPARATOS, Associate Professor, Institute for Future Initiatives, The University of Tokyo (South Africa) Cheikh Mbow, Professor and Director Future Africa, University of Pretoria (Burkina Faso) Adjima Thiombiano, Professor, Department of Plant Biology and Plant Physiology, University of Ouagadougou (Senegal) Mame Samba Mbaye, Professor and Head of Department, Department of Plant Biology, Cheikh Anta Diop University
Development of Resilient E-farming for agro-climate risk management in African Multi-environments	TSUBO Mitsuru, Professor, Arid Land Research Center, Tottori University (South Africa) Mokhele Moeletsi, Research Team Manager: Agrometeorology, Agricultural Research Council - Soil, Climate and Water (Senegal) Gualbert Dorego, Head of Agrobioclimatology Laboratory, National Centre for Agronomic Research, Senegalese Institute for Agricultural Research

Appendix 2/2

(AJ-CORE – Supported Projects FY2022~2024 -)

Title	Research Leader in Japan, Research Leaders in the Overseas
Application of eDNA metabarcoding for assessment and prediction of faunal Biodiversity of African Mangrove Ecosystem	KAJITA Tadashi, Professor, Tropical Biosphere Research Center, University of the Ryukyus (South Africa) Nasreen Peer, Lecturer, Department of Botany and Zoology, Stellenbosch University (Senegal) Jean Fall, Associate Professor, University Institute of Fisheries and Aquaculture, Cheikh Anta Diop University
Sustainable well-being through rapid detection, remediation and stakeholder awareness of contaminants in environments impacted by mining activities	Izabela Rzeznicka, Professor, College of Engineering, Shibaura Institute of Technology (South Africa) Nhamo Chaukura, Associate Professor, Sol Plaatje University (Botswana) Venecio U. Ultra, Associate Professor, Botswana International University of Science and Technology (BIUST)
Environmentally sound Water management for Sustainable Agricultural Practices in South Africa and Botswana: an international collaboration between Africa and Japan	NARITA Daiju, Professor, Graduate School of Arts and Sciences, The University of Tokyo (South Africa) Djiby Thiam, Associate Professor, University of Cape Town (Botswana) Wame L. Hambira, Senior Researcher, Okavango Research Institute, University of Botswana
Co-creation of a Community-based Water, Sanitation and Hygiene model with children and youth	YAMAUCHI Taro, Professor, Faculty of Health Sciences, Director, Center for Environmental and Health Sciences, Hokkaido University (South Africa) Catherine, Sutherland, Professor, University of KwaZulu-Natal, WASH R&D Centre (Botswana) Wellington, MASAMBA, Professor, Botswana International University of Science and Technology (Zambia) Charles, Michelo, Professor, Harvest Research Institute, Harvest University