Science and Technology Research Partnership for Sustainable Development (SATREPS)

International collaborative research Program

Public Invitation Guideline for Fiscal Year 2023

(Provisional Translation)

This Application Guideline is prepared for researchers who belong to Japanese research institutions/universities in Japan.

Researchers in other countries should consult their national government agency responsible for Official Development Assistance (ODA) technical cooperation, the Embassy of Japan, or JICA offices in their resident countries.

Public invitation period

From September 6, 2022 to November 7, 2022

Japan Science and Technology Agency

Research Partnership for Sustainable Development Group

Department of International Affairs

September, 2022

Notes for FY2023 Research Proposals

This invitation for research proposals is for proposals that will be implemented under the government's FY2023 budget, but submitted and selected before the budget is finalized. Moreover, the SATREPS (Science and Technology Research Partnership for Sustainable Development) program is linked with the official development assistance (ODA) program, and requires time for coordination with institutions in the counterpart country. For these reasons, in order to start the research projects as soon as possible, the process needs to start before the budget is approved. In consequence, when the budget is finally approved, details and amounts may change, which could potentially affect the fields of research, contract research expenses, and number of projects selected. It may also be necessary to request additional documentation following budget approval.

Changes in budget-related information will be posted on the following website, which should be checked occasionally. After proposals have been submitted, applicants can be notified by email when necessary.

https://www.jst.go.jp/global/koubo.html (Japanese)
https://www.jst.go.jp/global/english/koubo.html (English)

In this invitation, applications are accepted for research projects covering topics in developing countries for which research and development to resolve an issue is particularly necessary, and for which capacity building of researchers in that country is required. Projects also ought to envisage their outcomes being applied to the benefit of broader society as well as in the developing country, being used towards the resolution of global issues, and bringing scientific and technological progress. A project is not eligible if it consists merely of transfer of Japanese technology without entailing any joint research, or solely of surveys and other simple operations that do not make any contribution to the advancement of science and technology, or if it produces outcomes that can only be of benefit to one particular country. Please also refer to Appendix 1(p.114) for the countries eligible for this program.

1. How to Apply

FY2023 Research Proposals must be submitted via e-Rad, the Cross-ministerial R&D Management System.

To use e-Rad, researchers who are affiliated with a research institution need to check that their institution has been registered on e-Rad, and that the researcher's information has also been registered on e-Rad by the institution's administrative contact. Japanese researchers who are not affiliated with a research institution need to register their researcher information on e-Rad in advance.

Please be sure to choose the correct research area when submitting the research proposal via e-Rad.

Cross-ministerial R&D Management System (e-Rad) Portal Site
https://www.e-rad.go.jp/ (Japanese)
Deadline for submission of research proposals:
12:00 noon (Japan time) on Monday November 7, 2022

2. Submission of request for ODA technical cooperation

The SATREPS program is linked with ODA projects, and therefore, must also assume the role of technical cooperation project. The portion of the expenses attributable to ODA projects is covered not by contract research expenses but under the technical cooperation project framework. In submitting a research proposal to JST, please carefully read Chapter 4(page 52) and subsequent pages of this guideline and check that the principal investigator's institution can implement the project in accordance with the Agreement with JICA and "*SATREPS Project Jisshino Tebiki*". In addition, please liaise sufficiently with the researchers in the counterpart country on the details of the joint research. It is also necessary that the counterpart research institute submits an official request for ODA technical cooperation to Japan's Ministry of Foreign Affairs (MOFA) via the ministry or agency in the recipient country responsible for ODA and the local Japanese embassy. As with the previous fiscal year, for diplomatic considerations, the number of applications from a single country is limited to a maximum of twelve, and should this limit be exceeded, the government of the partner country will be required to narrow them down. **The deadline for submitting the official request for ODA technical cooperation is on Friday October 28, 2022(Japan time), which is earlier than the Japanese side.**

The internal deadline used by the counterpart ministry or agency is normally set earlier than the submission deadline, so please take that into account when liaising with the counterpart research institute. If the counterpart government does not request a technical cooperation project, a research proposal submitted in Japan will be considered incomplete and not go through the selection process.

3. Outline of the application and project selection process

(1) Research fields and areas

Research proposals are currently invited in the following 3 research fields, covering 4 research areas.

<table>
<tr><th>Research fields (number of research areas)</th><th>Cooperation request from developing country</th><th>Research period</th><th colspan="3">JST/JICA Funding</th></tr>
<tr><td>Environment and Energy[*1] (2 research areas)</td><td rowspan="2">Compulsory</td><td rowspan="2">3 to 5 years (after provisional period[*2])</td><td colspan="3">Approx. 100 million yen per project per year
Funding split:</td></tr>
<tr><td>Bioresources (1 research area)</td><td>JST (Contract research expenses, including indirect costs)</td><td>Approx. 35 million yen per year (Max. 175 million yen over 5 years, including provisional period[*2])</td></tr>
<tr><td colspan="3"></td><td>JICA</td><td>Without indirect costs[*3]:</td></tr>
</table>

Disaster Prevention and Mitigation (1 research area)				(ODA project expenses under the technical cooperation framework)	Approx. 60 million yen per year (Max. 300 million yen over 5 years) With indirect costs: Approx. 70 million yen per year (Max. 350 million yen over 5 years)

[*1] After the submission deadline, research proposals in the Environment and Energy research field will be allocated to one of two research areas ("Research contributing to the solution to global-scale environmental issues" or "Research on the sustainable use of resources and energy with a view to achieving carbon neutrality") for screening. In principle, this allocation will be based on the proposer's wishes, but depending on the content of a proposal it may be screened in a research area different from that requested by the proposer.

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

[*3] JICA's administrative indirect costs are different from the indirect costs of competitive funding programs.

[See chapters 2.1, 2.4,2.5 and 4.7.4]

Up to FY2015, the SATREPS Invitation for Research Proposals included the Infectious Diseases Control field. From FY2016, projects in this field are handled by AMED, the Japan Agency for Medical Research and Development. See the AMED website for details regarding the invitation for research proposals in the Infectious Diseases Control field:

https://www.amed.go.jp/koubo/20/01/2001B_00045.html

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Chapter 1 Before Public Invitation of Research Proposals

1.1 About SATREPS program

1.1.1 Objective of the research program

The SATREPS (Science and Technology Research Partnership for Sustainable Development) program is a collaboration between two Japanese government agencies: the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA). Based on the needs of developing countries, JST and JICA cooperate to promote international joint research targeting global issues[1] with an objective of utilization of research outcomes[2]. Implemented through collaboration with Official Development Assistance (ODA), the aim of the program is to acquire new knowledge and technology that lead to the resolution of global issues and the advance of science and technology, and through this process, to create innovations. International joint research under this program also aims to enhance the research and development capabilities of developing countries and helps create sustainable research systems able to address and resolve issues.

The SATREPS program constitutes an important component of the science and technology diplomacy promoted by the Japanese government. It is required both to strengthen diplomatic relationships with partner countries and to contribute to the national interests of Japan.

1.1.2 General Description of the research program

(1) Background to the program

There is a need for joint research and capacity building of research institutions based on the requirements of developing countries, as a means by which the promotion of science & technology and the training and development of human resources can boost each other. Japan recognized this need, and has given it the status of a key part in one of its major policies. ("Toward the Reinforcement of Science and Technology Diplomacy," May 19, 2008)

In this context, Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Ministry of Foreign Affairs (MOFA) implemented the SATREPS program in 2008 by creating a close tie between science & technology and official development aid, enabling the research institutions of Japan and developing countries to take part in international joint research that can contribute to the resolution of global issues.

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1 Global issues: Issues that are difficult to resolve by a single country or region acting on its own and that need to be handled by the international community as a whole

2 Utilization of research outcomes: The research projects should lead to future social and economic benefits, achieved by using newly obtained knowledge and technology to enhance government services or to develop products that can be deployed in the market.

(2) Program status

Following on from Japan's 5th Science and Technology Basic Plan, the Science, Technology, and Innovation Basic Plan (approved by the Japanese Cabinet in March 2021) recognizes that global limitations on factors including energy, resources, and food, as well as the domestic low birth rate, aging population, local socioeconomic impoverishment, and risk of natural disasters, are major issues. To this end, specifically, Japan needs to partner and cooperate with universities, public research institutions, the business community, as well as other countries and international organizations to carry out research and development to find solutions to global issues. In addition, it needs to promote the wider application and adoption of research outcomes in and outside of Japan, and take the lead in achieving an international consensus. Promoting science and technology cooperation with emerging and developing countries based on **the Sustainable Development Goals (SDGs)[3]**, and contributing to the development of science and technology, human resource development, and the resolution of global issues, including medium-term and long-term perspectives, are both identified in the section of the STI Basic Plan on "Promotion of international joint research and international brain circulation," and the **SATREPS program will also actively address the SDGs and contribute to the international community.**

In scientific and technological cooperation with emerging and developing countries, it is important to break away from the aid-driven forms of cooperation that have prevailed up to now, and move instead towards strategically establishing frameworks for more equitable partnerships with such countries in order to facilitate the generation of socially inclusive and sustainable innovation ("inclusive innovation[4]"). It is also important to strengthen international professional networks. Therefore, in our science and technology cooperation with emerging and developing countries, Japan needs to develop systems to promote inclusive innovation by pursuing collaborations with the counterpart country's government, universities, public research institutions, funding bodies, and companies, and help to foster young researchers and industry professionals in the country.

Additionally, to reinforce the foundation of science, technology, and innovation, Japan will train and secure highly trained personnel who will generate new knowledge and values, and a diversified workforce that will accelerate the creation of innovation. At the same time, Japan will create environments that enable each and every individual to maximize his or her contributions in the most appropriate settings, according to their own capabilities and motivations, has also been identified. It is expected that the SATREPS program will also lead to fostering Japanese talents tailored to globalization, via international joint research projects.

To advance science, technology, and innovation effectively, it is also important to flesh out initiatives aimed at strengthening the functions of the diverse implements of science and technology innovation

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[3] At "United Nations Sustainable Development Summit" held in September 2015, the outcome document "Transforming our world: the 2030 Agenda for Sustainable Development" with "the Sustainable Development Goals[3]" as a core component was adopted as a new and more comprehensive world action agenda for people, planet and prosperity.
https://www.un.org/sustainabledevelopment/

[4] "Inclusive innovation": in SATREPS, this refers to innovation that focuses on the potential of developing countries and includes people from those countries in the innovation process.

activities, such as universities, public research institutions, and companies, and expanding industry-academia-government partnerships.

(3) SATREPS program structure

The SATREPS program structure is shown in Figure 1. Launched by JST in cooperation with JICA, SATREPS promotes international joint research between Japan and developing countries. Through collaboration with research institutions in developing countries, it aims to facilitate the acquisition of new knowledge and technology that can lead to the resolution of global issues and the advancement of science and technology. Under this program, JST (which possesses expertise in funding research projects in Japan) provides support for research expenses in Japan and elsewhere (but not in the partner country), while JICA bears expenses necessary for the implementation of ODA technical cooperation (including dispatch of experts from Japan to the counterpart country, acceptance of foreign researchers to Japan, and provision of machinery and equipment). Management of R&D for international joint research as a whole is conducted cooperatively between JICA and JST. It is expected that the promotion of international joint research activities under this program will enable Japanese research institutions to conduct research more effectively in fields and targets where it is advantageous to implement the research in developing countries. Meanwhile, it is hoped that for research institutions in the developing countries (primarily universities and research institutions focusing on activities for public benefit, but excluding those related to military affairs), the establishment of research environment and the development of human resources through joint research activities will make it possible to develop self-reliant, sustainable research systems.

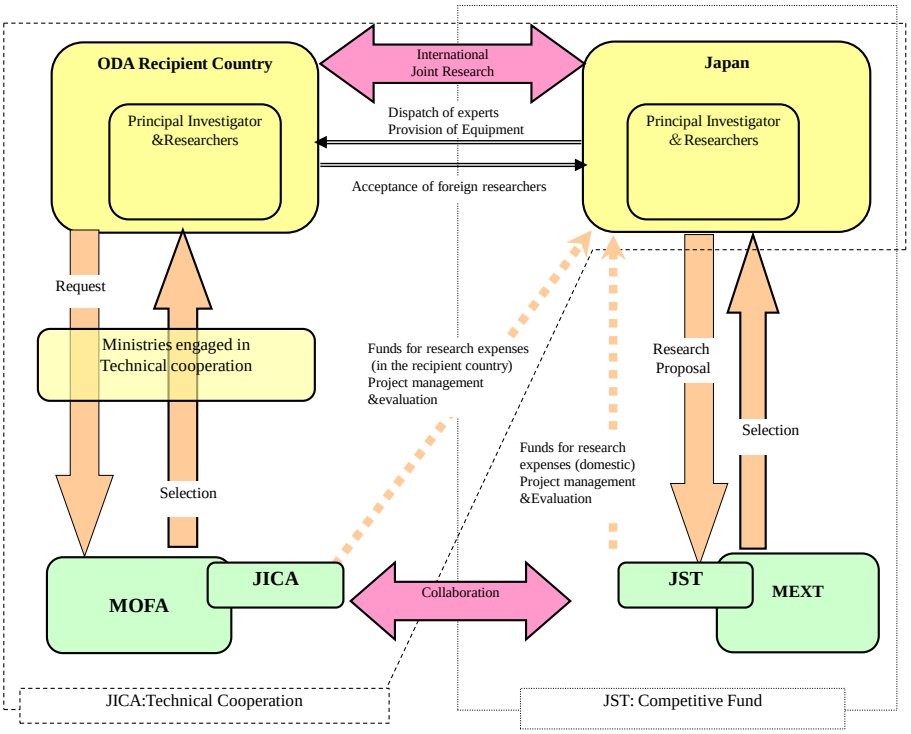

Figure 1. SATREPS Program Structure

(4) SATREPS program main flow

(i) Setting research areas, and inviting proposals and applications

The Japanese government (MEXT and MOFA) identifies fields of particular importance in resolving global issues and designates them as targets for research promotion under this program. Based on this, JST appoints a program director (PD) with overall responsibility for all research fields and management of the program, and research supervisor (RS) each with responsibility for a single, more specific research area in which they have expertise.

a. Program Director（PD）:

The Program Director has overall responsibility for management of the SATREPS program. He or she makes policy decisions on the overall thrust of the program, coordinates the different research fields and areas, decides on project selection (including provisional selection) and chairs the program committee that deliberates on important matters concerning research project management. The program committee consists of the Program Director, Research Supervisors, and external experts.

b. Research Supervisors (RS) :

Each of the Research Supervisors has overall responsibility for research in a specific research area. He or she joins external experts on the screening committee, acting as either the chair or a member of the committee. The screening committee is a subcommittee of the program committee, and it decides on candidates for SATREPS projects (including candidates for provisional selection). After projects have been approved (including provisional selection), the Research Supervisor handles the research management for his or her research area by coordinating the research plans of the individual research projects (including plans concerning research expenses and composition of the research team), exchanging ideas and views with principal investigators, giving advice concerning the research, conducting project evaluations, and by other means as necessary.

The Research Supervisor also gives advice to the collaborating country’s researchers.

JST invites researchers at universities and research institutes in Japan to submit research proposals in each research area. Decisions on which research projects are to be selected are made by a screening committee comprising POs and external reviewers.

While JST selects proposals, requests are received from developing countries for ODA technical cooperation for international joint research, and MOFA reviews these requests in conjunction with JICA in Japan. Therefore, it is essential for the principal investigator in Japan to coordinate with researchers in the ODA recipient country in order to confirm the details of the joint research when making an application to JST. It is a requirement that official requests for ODA technical cooperation specified as SATREPS be submitted by the research institution in the recipient country to MOFA in Japan by the specified deadline, via the ministry or agency in the recipient country responsible for ODA and the Japanese embassy that handles affairs for the recipient country. As with the previous fiscal year, for diplomatic considerations the number of applications from a single country is limited to a maximum of twelve in this fiscal year, and should this limit be

exceeded the government of the partner country will be required to narrow them down.

(ii) Research project selection by JST in Japan and ODA technical cooperation decisions by MOFA/JICA

The selection process for research projects at JST and the screening process for ODA technical cooperation at MOFA/JICA are interlinked. Both applications, one to JST by the Japanese principal investigator and one for ODA technical cooperation, have to be approved in order for the research project to be provisionally selected for the program. MOFA notifies the prospective recipient country of this decision. The respective processes conducted within the JST and JICA frameworks are outlined in Figure 2.

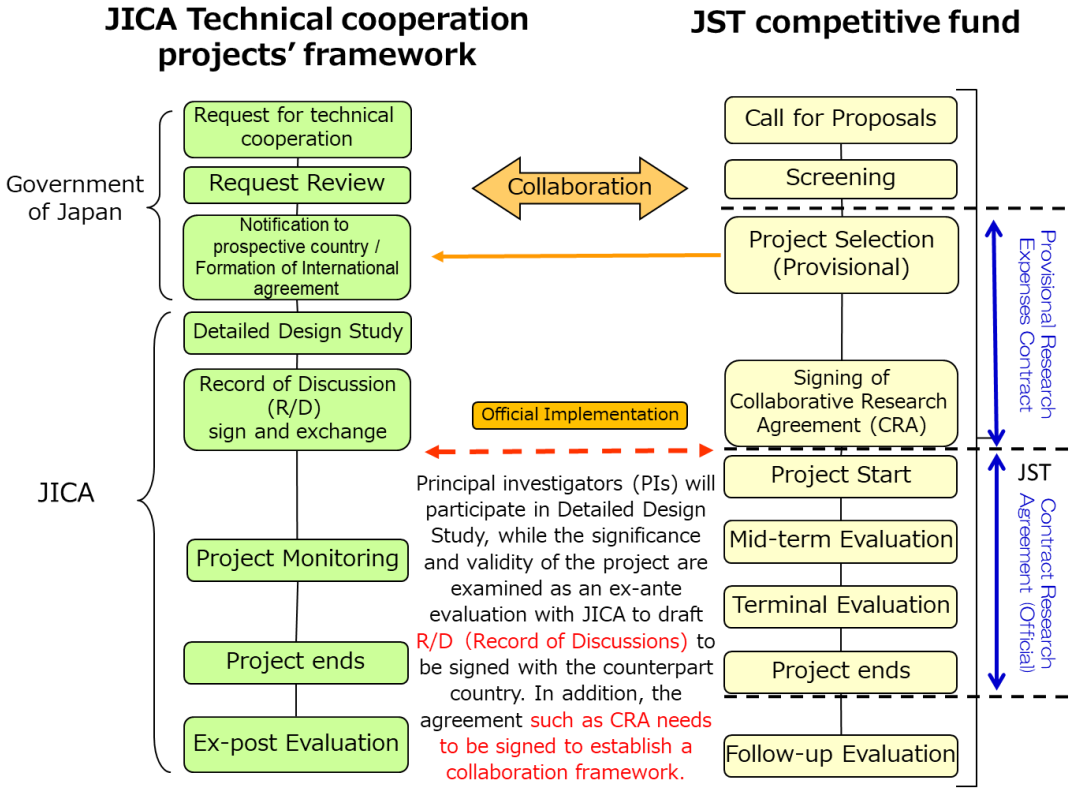

Figure 2. SATREPS Program Flow

(iii) Preparations for implementing selected projects

To implement the international joint research, a Record of Discussions (R/D) must be signed by the ODA recipient country and JICA to confirm that they agree on the details of the ODA technical cooperation. In addition, a Collaborative Research Agreement (CRA) or similar document about the joint research, of which details shall match the R/D and JST's Contract Research Agreement, must also be signed between the research institutions (parties concerned). Because of this requirement, after receiving notification of provisional selection, the principal investigator and other researchers are requested to work towards the prompt signing of these documents.

After giving notification that a research project has been provisionally approved, JST firstly concludes a Provisional Research Expenses Contract with the principal investigator's institution in Japan. This enables JST to make research funds available to Japanese researchers even before

the R/D is signed, in order for international joint research to start as soon as possible after the R/D is signed. Such expenses shall be limited to research expenses incurred in Japan when making preparations for the joint research.

In order to confirm the background and details of the ODA technical cooperation application and discuss details of the joint research, JICA sends an investigation team, comprising of the principal investigator in Japan and other members, to the prospective recipient country. The investigation team performs a Detailed Design (D/D) study and summarizes the results of discussions in a Minutes of Meeting (M/M) document, signed by JICA and the recipient country. JICA shall then create an R/D based on the details of the M/M. Once the R/D is signed by the director of the JICA overseas office and a representative in the developing country, the ODA technical cooperation project can begin.

However, the signing of the R/D may not be completed before the end of the year in which the project would be implemented (the end of FY2023). Even if a research project has been selected, if the R/D is not likely to be signed in the near future*, circumstances may make it impossible for the research to be implemented.

*Excluding cases in which the R/D and CRA cannot be signed by the end of the fiscal year in which the project would be implemented for reasons outside the control of the researchers and the research institution concerned, such as the impact of local circumstances or natural disaster, or should environmental and social considerations mean that more time is required for the environmental review.

(iv) Implementation of the international joint research

In order to implement the international joint research as a formal SATREPS project, the principal investigator and other researchers shall act in accordance with a contract (Contract Research Agreement) signed with JST and contracts signed with JICA (Agreement and project contract[5]). The principal investigator shall be responsible for the research project and for coordinating the running and management of the project as a whole.

References

Major science & technology policy and other documents concerning SATREPS:

○Toward the Reinforcement of S&T Diplomacy (May 19, 2008)
https://www8.cao.go.jp/cstp/english/doc/s_and_t_diplomacy/20080519_tow_the_reinforcement_of.pdf

[5] The Arrangement (Agreement regarding the implementation of technical cooperation under the framework of SATREPS) is a comprehensive document stipulating the rights and obligations of JICA and the principal investigator's institution. JICA and the principal investigator's institution shall conclude the Agreement when the R/D for the institute's first project is signed. In addition, JICA and the principal investigator's institution shall clarify the expenses that JICA will bear, and shall sign an Arrangement and project contract containing an estimate of these expenses and details of accounting procedures, for reference by either party. (JICA will only conclude an Arrangement with the principal investigator's institution, not with other research institutions involved in the research project.)

○Task Force Report on Science and Technology Diplomacy (February 2010, Council for Science and Technology Policy; in Japanese)
https://www8.cao.go.jp/cstp/sonota/kagigaiko/8kai/siryo1-1.pdf

○Recommendation for the Future (STI as a Bridging Force to Provide Solutions for Global Issues: Four Actions of Science and Technology Diplomacy to Implement the SDGs) (May 12, 2017, Advisory Board for the Promotion of Science and Technology Diplomacy)
https://www.mofa.go.jp/mofaj/files/000255801.pdf

○The 5th Science and Technology Basic Plan (January 22, 2016, Cabinet decision; in Japanese)
https://www8.cao.go.jp/cstp/kihonkeikaku/5honbun.pdf

○Integrated Innovation Strategy (July 17, 2020, Cabinet decision)
https://www8.cao.go.jp/cstp/togo2020_honbun.pdf (Japanese)
https://www8.cao.go.jp/cstp/english/ (English; may not include the latest Japanese version)

○Sustainable Development Goals (SDGs) (September 2015, UN Sustainable Development Summit)
https://www.un.org/sustainabledevelopment/

○Sustainable Development Goals (SDGs) Implementation Guiding Principles (September 2015, SDGs Promotion Headquarters Decision)
https://www.kantei.go.jp/jp/singi/sdgs/dai2/siryou1e.pdf

○Basic Plan on Ocean Policy (May 15, 2018, Cabinet decision)
https://www8.cao.go.jp/ocean/policies/plan/plan03/pdf/plan03.pdf (Japanese)
https://www8.cao.go.jp/ocean/english/plan/pdf/plan03_gaiyou_e.pdf (English; outline)

○Basic Plan on Space Policy (April 1, 2016, Strategic Headquarters for Space Policy)
https://www8.cao.go.jp/space/plan/plan3/plan3.pdf (Japanese)
https://www8.cao.go.jp/space/plan/plan-eng.pdf (English; the earlier version)

1.2 For researchers considering application and participation

1.2.1 Contribution towards achieving sustainable development goals (SDGs)

JST contributes to the achievement of Sustainable Development Goals (SDGs)!

At the UN Sustainable Development Summit held in September 2015, the outcome document "**Transforming Our World: the 2030 Agenda for Sustainable Development**" was unanimously adopted. The document focuses on Sustainable Development Goals (SDGs) as the more comprehensive new global action targets for humanity, the planet and prosperity. The 17 goals of the SDGs not only indicate challenges on sustainability facing humanity, but also require these challenges to be solved in an integrated and inclusive manner. To this end, it is hoped that Science, Technology and Innovation will solve these social issues and provide a scientific basis for making better policy decisions. These roles agree with the new responsibilities of science, i.e., "Science in Society and Science for Society" set forth in the "World Declaration on the Use of Science and Scientific Knowledge" (Budapest Declaration *) adopted by the International Science Council and UNESCO in 1999. As a core organization promoting Japan's science and technology policy, JST promotes cutting-edge basic research and is engaged in problem-solving R&D to meet the needs of society. SDGs are universal goals that can cover JST's mission. JST will co-create values with the industry, academia, government, and public through its programs, and work with the researchers to achieve a sustainable society.

President, Japan Science and Technology Agency

* The Budapest Declaration states that "Science for Knowledge," "Science for Peace," "Science for Development" and "Science in Society and Science for Society" are the responsibilities, challenges and obligations of science in the 21st century.

○ For the Sustainable Development Goals (SDGs) and JST's commitments, please visit the following website:
(Japanese) https://www.jst.go.jp/sdgs/actionplan/index.html
(English) https://www.jst.go.jp/sdgs/en/actionplan/index.html

1.2.2 Promoting diversity

JST is promoting diversity!

Diversity is essential for the environment to bring about Science, Technology and Innovation. It is possible to create a new world only when various people of every age, gender and nationality who have diverse expertise and values meet together, share ideas, take co-creative actions and collaborate. By promoting diversity in its all activities in science and technology, JST aims to tackle problems of our future society, and contribute to the enhancement of competitiveness of Japan as well as to the improvement of spiritual richness of its people. JST also aims to contribute to solving not only Japan's domestic issues but also those common throughout the world, in the light of the fact that various targets closely related to diversity promotion including gender equality are set in the "Sustainable Development Goals (SDGs)" agenda of the United Nations.

Currently, women's active participation is considered central to Japan's growth strategy as "the largest potential of Japan". Expanding the participation by women is important for research and development as well, and female researchers and their diverse perspectives are indispensable to scientific and technological innovations. JST expects more female researchers to apply actively. We are continually working to improve our existing "Childbirth, Child-raising, Nursing Care Support System," carefully listening to the opinions of the researchers who have taken advantage of this system to create an environment where other researchers can always return to their work.

We also consider the perspective of diversity when we call for and evaluate new research proposals.

We cordially invite you, all researchers, to apply without hesitation .

President, Japan Science and Technology Agency

We look forward to your application

JST is promoting diversity in research, because we believe that diversity means understanding people who have different ideas and merging those ideas with one's own to create new value. Diversity can help us solve not only domestic problems but also problems common throughout the world. Therefore, we will help tackle social issues on a global scale, such as those in the Sustainable Development Goals (SDGs), by working together with overseas institutions to promote diversity in research.

Diversity initiatives at JST target not only women but also early career and non-Japanese researchers. We continue to support our researchers who give birth, raise children or provide nursing care in order for them to fully exercise their abilities, and try to achieve gender balance in our committees and elsewhere. Our goal is to create an environment where people of every background can develop through friendly competition with each other. As we make our efforts to create new value, we particularly welcome applications from female researches who have been somewhat under-represented in the past.

So we look forward to receiving a lot of active applications, especially form female researchers.

General Manager, Office for Diversity and Inclusiveness, Japan Science and Technology Agency

1.2.3 Aiming for fair research activities

Conduct for responsible research activities

The recent incidents involving misconduct and dishonesty in research activities have resulted in an alarming condition that threatens the relationship of trust between science and society, and hinders the healthy development of scientific technologies. To prevent misconduct in research activities, autonomous self-purification of the scientific community must function. Each researcher must strictly discipline him/herself and work to create new knowledge and inventions that are useful for society, based on a high moral standard to meet the expectations of society.

As a funding agency for research, the Japan Science and Technology Agency (JST) considers research misconduct a grave issue and makes every effort to prevent it in cooperation with relevant organizations, thereby aiming to regain public trust.

1. JST believes that honesty in research activities is extremely important for Japan, which seeks to develop itself through science and technology.
2. JST supports honest and responsible research activities.
3. JST strictly condemns any misconduct in research activities.
4. JST will promote education in research integrity and reform its research funding programs in cooperation with relevant organizations, in order to prevent misconduct.

We must develop a healthy scientific culture based on social trust toward building a society filled with hopes and dreams for a bright future. We therefore request the continued understanding and cooperation of the research community and related institutions.

President, Japan Science and Technology Agency

Chapter 2 Public Invitation and Screening

2.1 Research fields and areas for public invitation

An applicant can file **only one research proposal as principal investigator for this program across all the research areas (including Infectious Diseases Control field handled by AMED**).

The SATREPS Projects Promoting Focused Themes sets out regions and research themes that are important for Japanese diplomacy by further promoting the SDGs through science, technology, and innovation (STI for SDGs). In this themes, research proposals are invited and will be selected in the three research fields covering four research areas for which the JST is inviting applications. In the SATREPS Projects Promoting Focused Themes, it is assumed in particular that the partner country's government is specifically aware of the issue, and that the content of the application is incorporated in a road map or development plan related to the partner country's STI for SDGs, in the expectation that R&D and utilization of research outcomes for the benefit of society in the country concerned will progress more smoothly.

Proposals that meet either of the following two conditions may apply under the SATREPS Projects Promoting Focused Themes for which applications are invited in FY2023[6].

(a) In Africa, subjects that are expected to contribute to the resolution of social issues through the proactive utilization of ICT in R&D or utilization of research outcomes for the benefit of society.

(b) In Oceania, subjects that are expected to contribute to adaptation to climate change or to disaster prevention and mitigation.

< Background >

(a)The Seventh Tokyo International Conference on African Development (TICAD7), a conference held every three years, was held in August, 2019 in Yokohama. In advance of TICAD7, the Advisory Board for the Promotion of Science and Technology Diplomacy (chair: Teruo Kishi, Science and Technology Advisor to the Minister for Foreign Affairs) formulated recommendations titled "Achieving an innovation ecosystem together with Africa," with the aim of establishing an innovation ecosystem in which both Japan and Africa create autonomous and sustainable innovation to enable the sustainable development of the Japan–Africa relationship as equal partners. These recommendations suggested three initiatives--(1) support for the resolution of social issues, including SDGs, harnessing STI; (2) continued and expanded STI human resource development; and (3) social implementation of STI results through enhanced utilization of ICT–based on four keywords beginning with S (SDGs, STI, SATREPS, and Society 5.0). Based on these recommendations, in this year's SATREPS Projects Promoting Focused Themes program research, proposals that are expected to proactive utilization of ICT in R&D or implementation in Africa are encouraged.

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[6] The content is the same as that for projects submitted and selected under the Top-Down SATREPS category for which applications were invited until FY2022. For the FY202 public invitation period, "Development of New Ammonia Synthesis System using Renewable Energy and Hydrogen" (https://www.jst.go.jp/global/english/kadai/r0304_southafrica.html) was provisionally selected as a Top-Down SATREPS research project.

(b) Oceania is an extremely important region in which the north–south sea lanes connecting Japan with Australia and New Zealand intersect with the east–west sea lanes giving access to the Pacific from the Indian Ocean and the South China Sea, and the area is of increasing diplomatic importance for Japan, which aims to achieve a “free and open Indo-Pacific.” This region is also extremely vulnerable to climate change, and attempts to resolve such issues through SATREPS can be expected to demonstrate concrete contributions by Japan in the fields of climate change and disaster prevention in Oceania. Japan hosted the 9th Pacific Island Leaders Meeting in 2021, and is now encouraging research proposals concerning adaptation to climate change or disaster prevention and mitigation in Oceania.

Please refer to Section 2.8 (How to apply) for details of how to apply for the SATREPS Projects Promoting Focused Themes program.

<Eligible research fields and areas>

Research Fields	Research Areas
Environment and Energy	1. Research contributing to the solution to global-scale environmental issues (Research contributing to SDGs, such as averting the climate crisis, adaptations to the present impacts of global warming and those predicted in future, preservation of biodiversity and ecosystem services, sustainable use of natural resources, pollution prevention and control, biomass-derived resources, and circular economies)
	2. Research on the sustainable use of resources and energy with a view to achieving carbon neutrality (Research contributing to SDGs concerning resources and energy, such as measures to restrict greenhouse gas emissions, renewable energy, energy conservation, decentralized societies, smart societies, and carbon pricing)
Bioresources	3. Research contributing to sustainable production and utilization of bioresources (Contributing to SDGs - food security, health promotion, nutrition improvement, and sustainable agriculture, forestry, and fisheries)
Disaster Prevention and Mitigation	4. Research on disaster prevention and mitigation towards social sustainability (Research contributing to the Sendai Framework for Disaster Risk Reduction and SDGs, from advance measures such as analysis of disaster mechanisms, building national resilience, strengthening social infrastructure, and appropriate land use planning, to reconstruction and recovery after a disaster has occurred and adaptations to disasters caused by climate change)

* To ensure that research proposals are appropriate for this program, please read the research field descriptions below carefully.

* From FY2023, research proposals in the Environment and Energy research field will be allocated to one of two research areas (“Research contributing to the solution to global-scale environmental issues” or “Research on the sustainable use of resources and energy with a view to achieving carbon neutrality”) for screening. In principle, this allocation will be based on the proposer’s wishes, but depending on the content of a proposal it may be screened in a research area different from that requested by the proposer.

* Please be aware that joint projects that include medical acts may not be eligible for this program, particularly in the fields of Environment and Energy, Bioresources, and Disaster Prevention and Mitigation, and that depending on the study, ethical considerations may be required.

* Up to FY2015, the SATREPS Invitation for Research Proposals included the Infectious Diseases Control field. From FY2016, projects in this field are handled by AMED, the Japan Agency for Medical Research and Development. See the AMED website for details regarding the invitation for research proposals in the Infectious Diseases Control field.

https://www.amed.go.jp/koubo/20/01/2001B_00045.html

(1) Environment and Energy

Research Area 1: Research contributing to the solution to global-scale environmental issues (Research contributing to SDGs, such as averting the climate crisis, adaptations to the present impacts of global warming and those predicted in future, preservation of biodiversity and ecosystem services, sustainable use of natural resources, pollution prevention and control, biomass-derived resources, and circular economies)

Development of new technologies and their practical application are urgently needed in order to tackle the many environmental issues facing humanity on a global scale, including the climate crisis, deterioration of ecosystems and biodiversity, the concentration of populations into urban centers, rising production and consumption, and the spread of pollution.

Many of the Sustainable Development Goals (SDGs) established by the United Nations (UN) are deeply interlinked with the resolution of environmental problems. The development of measures to combat climate change, including those to counter related negative impact, is a critical global task, as stated in SDG 13: *Take urgent action to combat climate change and its impacts*. Conservation and restoration of ecosystems and biodiversity in environments such as forests, wetlands, grasslands, and oceans, as well as their sustainable utilization, are outlined in SDG 15: *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*, and SDG 14: *Conserve and sustainably use the oceans, seas and marine resources for sustainable development*.

Other pressing issues that must be tackled in order for humans to live healthy, fulfilling lives include prevention of environmental pollution by harmful substances, restoration of polluted environments, attainment of food and water security, maintenance and upkeep of key social infrastructure in urban areas, and management and prevention of waste. The basis of such efforts include the development of sustainable urban societies based on low- environmental impact production and consumption, and the creation of areas fit for human settlement, which interlink with the UN SDGs in multiple facets.

To solve these issues, it is important that we combine the respective knowledge of natural and social sciences to reduce the impact on the environment and construct sustainable economic and societal systems, work to inform and educate the public, continue to further refine and enhance the knowledge and experience gained through this research, and to communicate this information effectively throughout the world.

Research proposals for FY2023 shall be based on these considerations. Several examples of the main research subjects are listed below, but other subjects are also acceptable if they meet the requirements mentioned above.

- ◆ Research on the observation, prediction, impact assessment, and adaptation to climate change
- ◆ Research that contributes to assessing the abundance of water resources and improving safe, sustainable water resource management, utilization, and treatment (including proposals to strengthen the capacity of water utilities and improve service quality)
- ◆ Research on establishing a material-cycle society (including collection and reuse of waste and useful resources)
- ◆ Research on the conservation and restoration of ecosystems and biological diversity

- ◆Research on urban environmental conservation (including greening) for the purpose of smart city construction, mitigation of environmental degradation as a result of urbanization, and the construction and operation of pleasant cities
- ◆ Research on reconstruction and restoration of environments damaged by large-scale disasters
- ◆ Research on sustainable use of natural resources
- ◆ Research on chemical pollution, its risk reduction and remediation

Applications for research proposals relating to systems and key technologies for the achievement of carbon neutrality and climate change mitigation (including energy saving, renewable energy, and new forms of energy) will be selected in Research Area 2, even if they also fit into this category. Please also consider applying under Research Area 4 if a research proposal aligns with the purpose of the Disaster Prevention and Mitigation research area (page 26).

Research Area 2: Research on the sustainable use of resources and energy with a view to achieving carbon neutrality (Research contributing to SDGs concerning resources and energy, such as measures to restrict greenhouse gas emissions, renewable energy, energy conservation, decentralized societies, smart societies, and carbon pricing)

One of the United Nations Sustainable Development Goals (SDGs), Goal 7, is an important global-scale issue evident in the SDGs, which aim to *leave no one behind.* Meanwhile, in order to achieve the mitigation of climate change (SDG-13), the whole world must set itself the goal of achieving carbon neutrality.

The Paris Agreement, which was adopted at the 21st Session of the Conference of the Parties to the United Nations Framework Covention on Climate Change (COP21) held in November 2015, set the target of restricting the increase in the global average temperature to below 2 °C. In order to achieve this, greenhouse gas emissions need to be reduced to the level of approximately 24 billion tons by the year 2050, requiring more than 30 billion tons of additional reductions. In October 2020, Japan also pledged to "reduce greenhouse gas emissions in Japan to net zero by 2050, that is, be carbon neutral by 2050, and aim to achieve a decarbonized society."

To achieve these goals, it has become essential for developed and developing nations to cooperate in generating innovations in order to achieve carbon neutrality. Japan's Assistance Initiatives to Address Climate Change 2018 also promotes "co-innovation," which generates innovation through collaboration—while specifically keeping the issues and the needs of the developing nations in mind—and emphasizes the reduction of GHG emissions on a global basis. Additionally, Japan's contribution to the reduction of GHG emissions in developing nations is expected to play a role in achieving Japan's reduction targets through the Joint Crediting Mechanism (JCM).

Research proposals for FY2023 shall be based on these considerations. Several examples of the main research subjects are listed below, but other subjects are also acceptable if they meet the requirements mentioned above. Please specifically indicate how the social systems and energy to be

developed present a greater possibility of realizing a low-carbon society and advantages over the existing systems in terms of economic performance and energy balance, in the proposal.

- ♦ Studies of the introduction and validation of social systems contributing to the realization of low-carbon societies in developing countries, such as carbon pricing
- ♦ Research on renewable energy, such as sunlight and solar heat, wind power, ocean energy, geothermal energy, and biomass.
- ♦ Research promoting the use of renewable energy through the generation and utilization of carbon recycling, green hydrogen, blue hydrogen, ammonia, methane and other substances
- ♦ Research on energy conservation in industrial processes and elsewhere, such as highly efficient and clean energy use technology, the introduction of highly efficient machinery, and the introduction of energy-recycling technology
- ♦ Research utilizing digital technologies such as ICT, IoT, and AI to create sustainable, resource-recycling cities and communities in forms such as smart cities, smart communities, smart agriculture, transport networks, and next-generation infrastructure
- ♦ Research on the sustainable use of natural resources such as fossil fuels and minerals, such as component technologies related to carbon capture, usage, and storage (CCUS); resource recycling; “urban mine” development; and resource collection systems
- ♦ Research contributing to reducing greenhouse gas emissions from non-energy sources, such as CH_4, N_2O, and HFCs

(2) Bioresources

Research Area 3: Research contributing to sustainable production and utilization of bioresources (Contributing to SDGs - food security, health promotion, nutrition improvement, and sustainable agriculture, forestry, and fisheries)

Since ancient times, human beings have utilized a diversity of bioresources for energy and to provide the necessities for healthy lives, such as food and fodder, medicine, and textiles. With recent global-level population increases and climate change, there is a need to develop radical, fundamental technology to deal with all of which threaten the sustainable production of bioresources. In addition, the United Nations Sustainable Development Goals (SDGs) set forth objectives for the utilization of bioresources in SDG 2: *End hunger, achieve food security and improved nutrition and promote sustainable agriculture*,SDG 14: *Conserve and sustainably use the oceans, seas and marine resources for sustainable development*, and SDG 15: *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss*.

The Conference of Parties to the Convention on Biological Diversity recognizes that biodiversity supports the existence of humans and provides a variety of benefits to humans. The Convention on Biological Diversity, Nagoya Protocol, and International Treaty on Plant Genetic Resources for Food and Agriculture were established by international agreement, with their objectives being the conservation of biological diversity and the sustainable use of its components, and fair and equitable sharing of benefits arising from genetic resources. The countries that are the parties to the

convention are now putting into place the legislative framework to achieve these objectives. Japan ratified the Nagoya Protocol in August 2017, and will henceforth be required to adhere to further international treaties.

In order that we can continue to enjoy the benefits of bioresources in the context of such global change, the importance of research and development into the production, utilization, and management of bioresources, particularly in developing countries, has been identified, and there is growing demand for the rapid deployment of the outcomes of such research to benefit society.

Research proposals for FY2023 shall be based on these considerations. Several examples of the main research subjects are listed below, but other subjects are also acceptable if they meet the requirements mentioned above.

- ♦ Research and development contributing to the sustainable production and utilization of bioresources (including resource management, breeding, cultivation, propagation and culturing technology for plant, animal, marine and microbial resources, production/distribution systems)
- ♦ Research contributing to the evaluation and effective utilization of bioresources (including using biodiversity for discovery, identification, and production of valuable substances derived from biological resources but excluding human drug development)

Applications for projects focusing on the following topics should be made under Environment and Energy.

- ♦ Research contributing to the conservation and restoration of ecosystems and biodiversity (Environment and Energy, Research Area 1)
- ♦ Research contributing to the utilization of biomass energy (Environment and Energy, Research Area 2)
- ♦ Research activities that primarily address environment and energy issues (Environment and Energy, Research Areas 1 and 2)

(3) Disaster Prevention and Mitigation

Research Area 4: Research on disaster prevention and mitigation towards social sustainability (Research contributing to the Sendai Framework for Disaster Risk Reduction and SDGs, from advance measures such as analysis of disaster mechanisms, building national resilience, strengthening social infrastructure, and appropriate land use planning, to reconstruction and recovery after a disaster has occurred and adaptations to disasters caused by climate change)

As outlined in the United Nations Sustainable Development Goals (SDGs) under SDG 11: *Make cities and human settlements inclusive, safe, resilient and sustainable*, and SDG 13: *Take urgent action to combat climate change and its impacts*, disaster prevention and mitigation is a key issue facing humanity on a worldwide scale. In order to work toward the realization of safe, resilient, and

sustainable cities and societies, it is necessary to conduct research that is founded soundly on local needs, and whose findings of which can be applied back to society. When addressing this need, in addition to utilizing Japan's knowledge and experience it is important that research and development is conducted not only in Japan but as part of a worldwide framework, in a comprehensive and systematic manner. Plans such as the Sendai Framework for Disaster Risk Reduction 2015-2030 and the Sendai Cooperation Initiative for Disaster Risk Reduction, which were established at the Third UN World Conference on Disaster Risk Reduction in March 2015 call for collaboration between disaster prevention policy and scientific research as well as support for developing countries, including technology transfer. In addition, the Paris Agreement finalized at COP21 in December 2015 outlines international targets and contribution in the DRR field, and research toward disaster risk prevention and mitigation is widely recognized as a key task both in Japan and overseas.

Amidst these circumstances, in addition to addressing natural disasters such as earthquakes, tsunami, volcanic eruptions, storms, storm surges, inundation, drought, heat waves, and landslides, this research area also includes research on preventing and mitigating disasters that urbanization may exacerbate (including research on post-disaster recovery and reconstruction). Examples include large fires in densely populated urban areas, flood damage, traffic and transportation accidents, damage to social infrastructure, and large-scale accidents at industrial complexes. It is important to adopt an integrated approach spanning disaster occurrence, forecasting, countermeasures in light of the effectiveness of investment in disaster risk reduction, and a plan to practical application while also seeking interdisciplinary collaboration with various fields beyond one's field of expertise. This includes analysis and explication of disaster mechanisms, validation of existing disaster risk reduction measures, and verification of risk communication strategies. In addition, studies are also required in areas such as building national resilience, land use planning, and improving social infrastructure, which are directly connected to strengthening social resilience in future.

When studying post-disaster recovery and reconstruction it is particularly important that those vulnerable to damage, such as women, children, persons with disabilities, and older persons, are taken into consideration. In this regard, research topics which incorporate the perspectives of SDG-5: Achieve gender equality and empower all women and girls, are particularly welcome.

Research proposals for FY2023 shall be based on these considerations. Several examples of the main research subjects are listed below, but other subjects are also acceptable if they meet the requirements mentioned above.

- Research on clarifying the mechanisms and prediction of disasters associated with natural phenomena such as earthquakes, tsunami, volcanic eruptions, storms, storm surges, inundation, drought, heat waves, and landslides, together with measures to mitigate such disasters and risks, as well as measures for restoration and reconstruction, and research on effectiveness of investment in disaster risk reduction.
- Research on measures to mitigate the damage from major disasters that have become more serious with urbanization (fires, urban flooding due to torrential rain, damage to social infrastructure such as lifelines and transportation networks)

- ◆ Research on building national resilience to create disaster-resistant, resilient communities, land use planning and urban design, and improvements to social infrastructure and its sustainable operation
- ◆ Research contributing to the prevention and mitigation of regional and urban disasters through the prompt collection and effective utilization of disaster information (including the development of technologies to utilize disaster observation satellites, remote sensing, UAV, GIS, GNSS, ICT, IoT, AI, and other digital technologies)
- ◆ Research for the prevention of, mitigation of, and recovery from disasters that combines approaches across the natural sciences, humanities, and social sciences to help establish precise and practical disaster forecasting and enable effective recovery
- ◆ Research on disaster countermeasures and improving overall social resilience during the COVID-19 pandemic

2.2 Schedule for application and selection

The schedule for applications and selection is set out below. The applications start date and deadline are fixed, but the other dates are provisional. They may change without notification. Please see the program website for up-to-date schedule details.

SATREPS research proposals website
https://www.jst.go.jp/global/english/koubo.html

Applications start date	Tuesday September 6, 2022
ODA applications deadline[7]	**Friday October 28, 2022(Japan time) (applications received after the deadline will not be accepted)**
Applications deadline	**12:00 noon (Japan time) on Monday November 7, 2022 (applications received after the deadline will not be accepted)**
Document screening	Late November 2022 to February 2023
Notification of selection for interview (only for applicants who have passed document screening)	Early February to Late February 2023
Interviewing for selection	Late February to Mid March 2023

[7] MOFA must receive an application for ODA from the government of the prospective recipient country by the deadline. This is one of the conditions for selection. As with the previous year, for diplomatic considerations the number of applications from a single country is limited to a maximum of twelve in this fiscal year, and should this limit be exceeded the government of the partner country will be required to narrow them down.

Provisional selection and notification[8]	Mid May 2023 onwards, after JST research budget approval
Start of research	May 2023 or later, following signing of the R/D and CRA

2.3 Countries eligible for SATREPS program

Please refer to Appendix 1 for the countries that are eligible to request ODA technical cooperation.

[See: Appendix 1]

2.4 Research period

The period of international joint research (period to conduct the technical cooperation project set out in the R/D) is three to five years.

As shown in Figure 3, within the limits of the budget for JST contract research expenses determined at the time of provisional selection, it may be possible to extend the completion date for research activities in Japan funded by JST contract research expenses up to the end of the fiscal year in the final year of joint international research implementation prescribed under the R/D (in such cases, payment of expenses incurred by the ODA side extending past the period stated in the R/D will not be made).

Following provisional selection of research projects, JST contract research expenses are available to Japanese research institutions before the signing of R/D and other agreements (CRA, etc.) to ensure swift implementation of the international joint research project after the R/D and other agreements are signed. This coverage only extends to research expenses incurred by the Japanese team for the purpose of preparation for the international joint research activities.

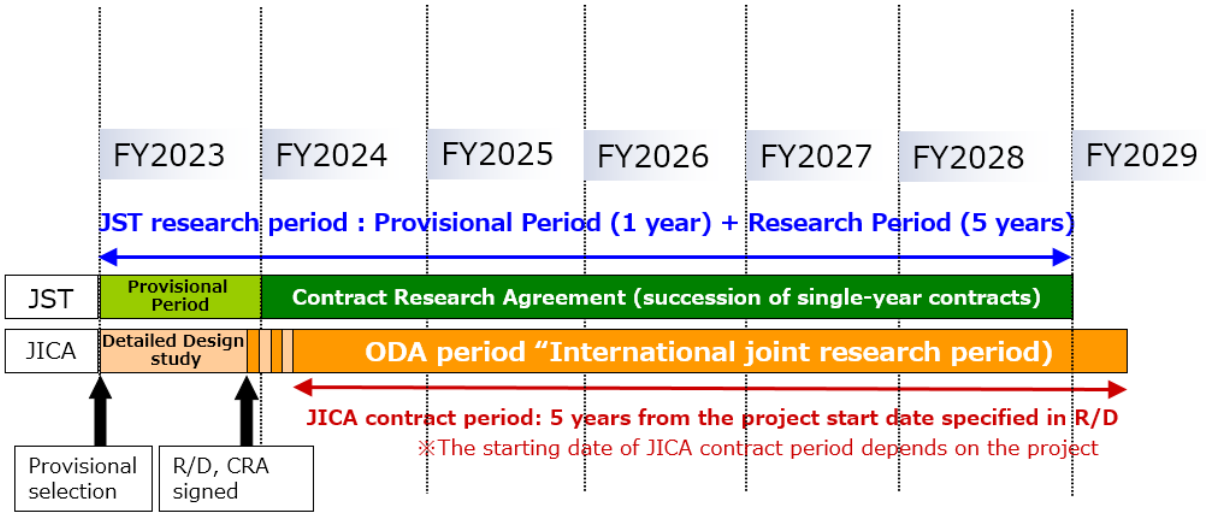


Figure 3. Extent of Research Period (5-year project)

[8] Around the same time as the provisional selection of research projects in Japan, notification regarding selections for the corresponding ODA technical cooperation will be made to applicant governments. Subsequently, when the R/D is signed between JICA and the counterpart, the research project will be formally approved for awarding, and international joint research will begin. Selection of the research project in Japan will be announced to the public by JST and JICA at an appropriate time after notifying the principal investigator of provisional selection.

2.5 Research expenses

2.5.1 JST contract research expenses and ODA project expenses

In this program, JST will provide financial support to the Japanese research institution for the project activities in Japan and JICA will bear the expenses necessary for the implementation of ODA technical cooperation (including dispatch of experts from Japan, acceptance of foreign researchers, and provision of machinery and equipment) in the partner country, which is the recipient country under the ODA technical cooperation framework.

(1) Research expenses awarded by JST

The overall contract research expenses awarded by JST per project shall be approximately JPY 35 million per year (and not exceed a total of JPY 175 million for a five year project), including indirect costs and overhead. The amount is a rough indication and assumes the approval of the FY2023 budget. Please be forewarned that changes and adjustments to amounts and (particularly this year) also to particulars may be required according to budgetary considerations.

JST will distribute the full amount of research funds granted to the research institutions that principal investigator and main research collaborators are affiliated with. Based on the Contract Research Agreement, JST will pay the research institute contract research expenses, which consist of research expenses (direct costs) and indirect costs (in principle, 30% of the direct costs). Additionally, rules and guidelines unique to this project have been set for certain items in line with the Contract Research Agreement, Administrative Procedures, cross-ministerial expenses categorization table, etc. The handling of universities (recognized as such by JST, including universities, public research institutes, public service corporations, etc.) may differ from that of corporations, etc. (mainly non-university-affiliated research institutes of private-sector corporations).

Other details concerning disbursement of JST contract research expenses are available at the following website under Contract Research Agreement Administrative Procedures (Currently Japanese only).

https://www.jst.go.jp/contract/index2.html

(2) ODA project expenses provided by JICA

For each project, ODA project expenses are approximately JPY 60 million per year, limited to a maximum of JPY 300 million yen over a 5-year project for projects with no indirect expenses, and approximately JPY 70 million per year, limited to a maximum of JPY 350 million yen over a 5-year project for projects with indirect expenses. The actual budget is fixed after the Detailed Design (D/D) study of the research project, which does not occur until after provisional selection of the project

The ODA project expenses provided by JICA are technical cooperation costs, and the project contract is basically an agreement whereby the principal investigator’s institution undertakes to provide the technical cooperation services on JICA’s behalf. Consequently, the approach to the use of funds and supervision of expenditures is very different from that applying with other research subsidies and grants. Details of expenses that can be met are given in chapter 4 “Outline

of technical cooperation through ODA, which should be studied carefully.

The current invitation for research proposals has been made before the government budget has been approved. Consequently, depending on the details and the amounts included in the government budget that is finally approved, there may be changes in the upper limit to the funding available per project.

[See: 4.7.4(4)]

2.5.2 Expenses covered by JST and JICA

As a rule, research expenses are categorized into those covered by JST as contract research expenses and those covered by JICA as project expenses, as described below: (See also Table 1.)

A. Research expenses incurred in Japan and other locations outside the developing country will be supported by JST as contract research expenses.
B. Costs incurred within the developing country (on-site machinery and equipment procurement, etc.) and expenses needed to invite researchers to Japan from the recipient country (round trip travel expenses, lodging charge, domestic travel expenses, part of costs of acceptance) are shouldered by JICA.
C. As a rule, travel costs and on-ground expenses for researchers from Japan dispatched to the counterpart institutes on official business shall be borne by JICA (for those who are dispatched for more than one year, travel cost for dispatch and return, transfer allowance, other allowances, etc.). Activities relating to the international joint research undertaken by researchers from Japan within the developing country will be governed by the provisions on tax immunity and permission for activities prescribed in the R/D concluded between JICA and the counterpart institutes.

When SATREPS project team members are dispatched to the ODA recipient country, JICA does not cover supplementary labor costs and overhead costs or in-country salary (paid directly as a fixed monthly amount when the team member is affiliated with an institution but not paid during the dispatch period) incurred by the researcher's institution. This is also the same in the case of companies or NGOs.

As JICA supports that country with ODA under the technical cooperation framework, the country is required to depend on its own efforts. Consequently, the local institution's costs incurred for the project (labor costs, rent, consumables used by local researchers, operation and maintenance of machinery and equipment supplied, domestic transportation fees for local researchers, daily allowance for attending a meeting, and other miscellaneous costs) should in principle be covered by its own country, based on the content agreed in the R/D.

[See: 4.7.4(5)]

Expenses	JST	JICA
A: Research expenses incurred in Japan	YES	
A: Research expenses incurred outside of partner countries (Travel expenses to third countries, on-site expenses, etc.)	YES (Note 1)	

B: Costs incurred in partner countries	Exceptionally (Note 2)	YES (Note 3)
B: Travel expenses to invite researchers to Japan from partner countries	Exceptionally (Note 4)	YES
C: Travel expenses between Japan and partner countries	Exceptionally (Note 5)	YES

Table 1. Categories of expenses covered by JST and JICA

Note 1: Joint projects with research institutions in a third country are not covered.

Note 2: In principle, financial support from JST is limited to costs that can be covered as research expenses in the partner country, and that cannot be covered by JICA, such as travel costs and on-ground expenses incurred through activities considered to be an extension of research in Japan.*

Note 3: Research expenses incurred in the ODA recipient country include equipment, research supplies, and consumables required for the Japanese researchers to conduct international joint research in the partner country. For details, please also refer to Section 4.7.4 (Project contract).

Note 4: Limited to external experts, etc. who are not part of the partner country's research team.

Note 5: Limited to students, external experts, etc., and other cases where dispatched to the partner country as JICA experts is not possible. However, if students are traveling to engage in research, the institution with which they are affiliated must take sole responsibility for their trip (including the duty to ensure their safety) as well as making all the arrangements and completing all the administrative procedures, and must meet all the required conditions.

* In some exceptional cases, it may be possible for costs relating to official trips to the developing country to be covered by JST research expenses. See Contract Research Agreement Administrative Procedures for details. (Currently Japanese only).

https://www.jst.go.jp/contract/index2.html

When a private-sector corporation or similar entity submits an application as the research institution, coverage of expenses may differ from the description given above. Consult JST/JICA in advance for details.

2.6 Number of research projects to be selected

The number of projects to be selected will vary according to the Japanese government's FY2023 budget. There is also potential for selection of a number of feasibility studies*. Out of all the selected projects, a maximum of three will be selected as SATREPS Projects Promoting Focused Themes.

* A feasibility study may be selected by the program committee in circumstances when a proposed project that is not selected this year has desirable characteristics, such as being a proposal involving a country for which no projects (or very few projects) have yet been selected, or a proposal with a desirable research topic, and furthermore, has the potential for becoming a substantially improved project proposal one year later if rewritten after conducting preliminary surveys, etc. When a proposal is selected for a feasibility study, funding is provided for the costs entailed in the

implementation of preliminary studies, etc. Having been selected for a feasibility study does not give the project any special priority in the next or subsequent year's selection process.

2.7 Application requirements

2.7.1 Applicant

- The principal investigator (PI; applicant) must be affiliated with a Japanese research institution[9], be able to fulfill their duties as principal investigator for the international joint research project, and be able to engage in the international joint research from start to finish.
- The application should be written by the principal investigator in person.

2.7.2 Research Participants and Research institution(s)

- Japan side research participants are required to be affiliated with a research institution in Japan.
- If a researcher has posts at both a Japanese research institution and a research institution in the partner country, he or she cannot be included in both institutions' lists of members, so has to choose which one.
- If a researcher not affiliated with the research institution is required to participate in the project, appropriate procedures need to be taken by their institution (and the researcher) and the research institution.
- An institution in a third country (neither Japan nor the partner country) cannot participate in the joint research. Moreover, a researcher whose only affiliation is an institution in a third country cannot participate in the joint research. See the Q&A for details.
- International agencies can participate, but with certain limitations. See the Q&A for details.
- The lists of members should be shared between the Japan side and the partner country side.
- Proposals involving a corporation or similar entity as the principal investigator's institution need to meet certain conditions to be eligible for selection.

[See: Q&A]

2.8 How to apply

Forms for research proposals for FY2023 (listed in Table 2 below) shall be downloaded from the SATREPS website below, filled in, and then submitted using e-Rad. Submit as a single file, utilizing PDF etc. as the file format where necessary. Refer to the guidelines for the target outcomes sheet of Form 2 and to the e-Rad manual (additional information for the use of researchers submitting SATREPS proposals) (only in Japanese).

https://www.jst.go.jp/global/english/koubo.html(English, with limited information)
https://www.jst.go.jp/global/koubo.html (Japanese, with complete information)

[9] "Japanese research institutions" refers to universities, National Institute of Technology, independent administrative institutions, public-sector research and development institutes, public-service corporations, or private-sector corporations, etc., each of which must be incorporated in Japan, and also to national institutes that are not incorporated. For incorporated entities, no distinction is made between the forms of incorporation, but the corporation's ability to implement research is scrutinized during the selection process.

Please be sure to choose the correct research area when submitting the research proposal via e-Rad.

When proposing a SATREPS Projects Promoting Focused Themes, the check box[10] on Page 1 of Form 1: Proposal submitted by the principal investigator asking “Is this application for a SATREPS Projects Promoting Focused Themes?” must be checked, and check box 6 stating that the proposal is either “match with the National Development Plan” or “match with STI for SDGs Road Map” in the ODA Application submitted by the principal investigator in the partner country must also be checked.

Form 1	Proposal
Form 2	Research Theme Concept
Form 3	Japanese Institution Implementation Structure
Form 4	Grants Received Through Other Programs
Form 5	Counterpart Institution Implementation Structure
Form 6	Research Expense Plan
Form 7	Written Approval from Institution Director
Form 8	Plans by Private-Sector Corporations, etc.
Form 9	Proposal Coordination Status

Table 2. Forms for Research Proposal Applications

[See: Appendix 2]

2.9 Selection method

2.9.1 Screening method

At the selection stage, JST/MEXT and JICA/MOFA collaborate to screen applications. JST/MEXT primarily screen applications from a science and technology viewpoint. In contrast, JICA/MOFA primarily screen applications from an ODA viewpoint. As research is supported under a competitive funding program and as ODA projects, it needs to take the form of cooperation that contributes to addressing or resolving issues faced by the partner country and is consistent with the specific Country Development Cooperation Policy (the former Country Assistance Policy). It must also display a practical approach, showing a plan for applying the research outcomes to the benefit of society. It will be rejected in the event that it is judged to be unsuitable as an ODA project for diplomatic reasons or due to serious project implementation issues. Please be aware that JST will provide submitted documents and the results of documents and interview screenings to MEXT, MOFA, and JICA.

During the assessment of proposals for SATREPS Projects Promoting Focused Themes, checks

[10] The following check boxes in "6. Background of the T/C" of the ODA application form (APPLICATION FORM FOR JAPAN'S TECHNICAL COOPERATION).

□ Contents of the T/C match with the National Development Plan

□ Contents of the T/C match with STI for SDGs Roadmap

will be made to confirm that they are included in the eligible regions and countries indicated in Section 2.1 (Research fields and areas for public invitation) and that they meet the conditions for research topics.

2.9.2 Screening flow

The screening committee composed of external experts in their relevant scientific disciplines appointed by JST and JICA will conduct the selection in two steps—document screening and interview.

After the submission deadline, research proposals in the Environment and Energy research field will be allocated to one of two research areas (“Research contributing to the solution to global-scale environmental issues” or “Research on the sustainable use of resources and energy with a view to achieving carbon neutrality”) for screening. In principle, this allocation will be based on the proposer’s wishes, but depending on the content of a proposal it may be screened in a research area different from that requested by the proposer.

A maximum of three of the research topics proposed as SATREPS Projects Promoting Focused Themes will be selected as this type of project. Research topics not selected as SATREPS Projects Promoting Focused Themes may be selected as regular SATREPS projects. The screening process for SATREPS Projects Promoting Focused Themes will include confirmation that both the check boxes in Form 1: Proposal, submitted by the principal investigator, and the ODA Application have been checked, as well as confirmation that they are associated with the STI for SDGs Road Map or Development Plan of the partner country. If both the check boxes are not checked, or if the association with the STI for SDGs Road Map or Development Plan of the partner country cannot be confirmed, they will not be selected as SATREPS Projects Promoting Focused Themes.

2.9.3 Managing Conflicts of Interest (COI)

To achieve fair and transparent evaluation and research fund allocation, JST will manage COI as follows in accordance with JST’s rules.

(1) Managing COI of those involved in screening.

For fair and transparent evaluation, the following stakeholders having connections with the principal investigator do not participate in the screening.

a. A person who is in kinship with the principal investigator.
b. A person who belongs to the same department or has the same specialization at a research institution, such as a university or national R&D agency, or belongs to the same company with the principal investigator.
c. A person who conducts a joint research closely with the principal investigator. (For example, a person performing a joint project or writing a co-authored research paper, a research member having the same purpose, or a joint researcher pursuing the proposer’s research project who is considered to belong to a research group substantially the same as that of the proposer)
d. A person who has a close teacher-and-student relationship or a direct employment relationship with the principal investigator.

e. A person who is in an academic competition with the research project of the principal investigator or belongs to a company in a competitive relationship in the market.
f. Others determined by JST to be a stakeholder.

(2) Managing COI of the principal investigator

If the principal investigator makes a research proposal with a “principal investigator-related organization” specified as a joint research institution, and JST allocates research funds to the “principal investigator-related organization,” it may fall under COI. JST properly determines and manages COI between the principal investigator and the “principal investigator-related organizations” in consideration of the necessity, rationality and appropriateness of their relationship to avoid any doubt from third parties.

The “principal investigator-related organizations” refer to the joint research institutions that fall under any of the following. For “a” and “b,” not only the principal investigator but also the spouses and relatives within the first degree of the principal investigator (hereinafter collectively referred to as “Principal investigator, etc.”) shall be handled as follows.

a. An organization established based on the R&D results of “principal investigator, etc.” (including the cases where the principal investigator, etc. is not directly involved in management and only holds the title of a technical adviser, or where the principal investigator, etc. only hold shares.)
b. An organization where the “principal investigator, etc.” is appointed as an officer (including CTO but not a technical advisor).
c. An organization where the “principal investigator” holds shares.
d. An organization from which the “principal investigator” earns royalty income.

JST will deliberate a research proposal with a “principal investigator -related organization” specified as a joint research institution at a program committee from the perspective of necessity, rationality and appropriateness of selecting the principal investigator-related organization.

To specify a “principal investigator -related organization” as a joint research institution, the applicant is requested to declare that the “principal investigator -related organization” is listed in the joint research institutions in the Form 9 of proposal].

JST may request applicants to submit additional documents to manage COI of the principal investigator.

(3) Managing COI of JST

Selecting a JST-invested company (hereinafter referred to as the “invested company”) for the program, and allocating research funds to the invested company may fall under the COI of JST. JST properly determines and manages COI between JST and the invested company to avoid any doubt from third parties.

JST will deliberate a research proposal with a JST invested company specified as a participating organization at a program committee from the perspective of necessity, rationality and appropriateness of selecting the invested company.

To specify the JST invested company as a participating organization, the applicant is requested to declare that the JST invested company is listed in the participating organizations in the Form 9 of proposal.

JST manages COI to secure the fairness and transparency of JST, and does not handle a JST-invested company unfavorably. Cooperation with the JST's management of COI is requested for.

* For JST invested companies, please visit the following website. For companies investment in which is completed, the above declaration is not needed as they are no longer project to COI management.

https://www.jst.go.jp/entre/en/result.html

* The reference date for the declaration is the start date of public invitation for this program. The declaration should be made for companies investment in which by JST has been publicized as of the date. For companies investment in which is internally determined but not disclosed, no declaration is needed for the confidentiality within JST.

For the JST-invested companies that are publicized, please visit the following website:

https://www.jst.go.jp/entre/news.html

2.10 Review criteria and considerations for the selection process

2.10.1 Review Criteria

◆ Scientific/technological value— The proposal must target the acquisition of new knowledge that can contribute to the advancement of science and technology and to the development of new technology for addressing global issues.

◆ Merits for Japan— The project must have the potential to develop science and technology that could not be achieved by research in Japan alone, to contribute to society or the business community, and to train young Japanese researchers. It must also have the potential to increase the presence of Japanese science and technology in the partner country and worldwide.

◆ Setup for research in both countries— There must be a concrete plan for joint research with partner country researchers. The principal investigators in Japan and in the partner country must also be clearly designated, organizational frameworks for conducting the research in Japan and the partner country must be in place, their respective division of roles must be clearly indicated, and they must be willing to provide each other with sufficient support and cooperation. Research institutes in the partner country must not be engaged in other projects that require excessive effort. Moreover, at the end of the joint research period, the developing country must have prospects for continuing to manage and maintain the machinery and equipment provided and continue with research.

◆ Efficient & appropriate research plan— There must be a suitable research expenses plan that takes into account research cost performance in the promotion of joint research.

◆ Competent principal investigator— It is vital for the principal investigator to possess strong resolve and enthusiasm for promoting joint international research as the leader of a joint research team as well as exhibit strong and trustworthy leadership under JICA technical cooperation.

◆ Implementation plan and feasibility— There must be a plan for the utilizing the anticipated research results for the benefit of society (including the entity/system instigating utilization of research outcomes, activities on the part of the partner country, and vision for their expansion to other regions or markets after the end of the research period). The activities for promoting this plan to be conducted during the research period must be clear and appropriate, and the understanding of the persons concerned in the partner country and the participation of appropriate partner country government entities must be obtained.

◆ Alignment with ODA policy and appropriateness as ODA project— The proposal must align with the Country Assistance Policy, and must be a high priority/need for the partner country government. It must also have the aims of human resource training and improving organizational capacity for the partner country. Additionally, there must be no issues with safety or public security in the area where the activities are to be conducted.

For Country Assistance Policies, see the Foreign Office website (only in Japanese) (https://www.mofa.go.jp/mofaj/gaiko/oda/about/seisaku/index.html). *For safety information on the site of research cooperation, please see the Foreign Office website (only in Japanese) (https://www.anzen.mofa.go.jp)

2.10.2 Considerations for the selection process

Reginal balance and eligible countries:

◆ From the perspectives of diplomatic policy and science and technology policy, the selection process takes into account the need to ensure that there is an appropriate regional balance of selected projects among recipient countries (for instance, to prevent projects from clustering in one region), and also a balance in terms of project topics (for instance, to prevent excessive concentration of one particular type of research).

◆ Proposals for partnering with countries that have never been selected or rarely been selected are particularly welcome.

◆ Proposals for research projects involving African nations or least developed countries (LDCs)[11] are particularly welcome, especially projects that address the needs of these countries by incorporating initiatives for capacity development, local surveys and data analysis, and the development and application of appropriate technology or technology of direct utility in coping

[11] As of September 2020, The OECD DAC List of ODA Recipients designates the following 46 countries as Least developed Countries (LDC). For the countries that are eligible to request ODA for this program, please refer to Appendix 1.

◆Africa (33): Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, the Comoros, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, South Sudan, Sudan, Tanzania, Togo, Uganda , Zambia

◆Asia (7): Bangladesh, Bhutan, Cambodia, Laos, Myanmar, Nepal, East Timor

◆Pacific Islands (3): Kiribati, Solomon Islands, Tuvalu

◆Middle east (2): Afghanistan, Yemen

◆Latin America (1): Haiti

with problems. To ensure sustainable research activities in LDCs, many cases will require medium- to long-term assistance such as technical cooperation from institutions (JICA, etc.) and the corresponding research proposer's action plan for after the completion of the SATREPS project. Consequently, it is preferable that proposals targeting LDCs include plans for medium- to long-term assistance at the time of proposal.

◆ In view of the nature of the program in dealing with issues on a global scale, proposals for conducting international joint research involving Japan and more than one other country are also possible. Research projects extending over several countries need to ensure that the ODA applications from each country are submitted by the deadline. If the documents are not submitted by all countries, the whole application is judged to be incomplete and excluded from selection. It is also necessary to have a signed R/D from all associated countries in order for the project to start. The maximum for the expenses of each project receiving support from JST and JICA are fixed, even if the project involves more than one other partner country.

◆ The security situation, circumstances in parts of the partner country where research will be conducted may be examined as part of the selection process because of the potential for restrictions on travel to the country and on the ability to implement the project.

For more on security, please refer to "5.20.2 Overseas safety measures and responsibility for the safety of researchers" .

◆ Furthermore, if it appears unlikely that an international agreement for the SATREPS project will be concluded, that may be examined as part of the selection process.

Implementation structure :

◆ Sustainability is increased if the entity that will take on responsibility for the results after the end of the project participates from the initial stages of research and development. In addition, broadening the scope of partnership between industry, academia, and government is critical in order to pursue technological innovation in an efficient manner. From this perspective, proposals that involve collaboration with corporations (industry-academia-government collaboration[12]) capable of leading research, development, and practical application are welcome. When making an application for an industry-academia-government collaboration project, the principal investigator's institution should fill in Form 2 (5. Plan to practical application and feasibility), and the participating corporation should fill in Form 8, with both explaining in detail their ideas for the collaboration. (If the principal investigator's institution is a private sector business, also fill in and submit Form 8.) When the research period ends, corporations that submitted Form 8 will submit a report. If necessary, financial and other screening of corporations and other groups will be conducted.

◆ It is desirable that the institution in the partner country constructs partnerships with the private sector and related government entities, so that after the end of the research period the

[12] For the purposes of this program, entities participating as "industry" players have businesses incorporated in Japan.

setup remains in place and capabilities continue to be strengthened. Alternatively, it would be desirable for the approach for returning outcomes to society to involve partnerships with private businesses such as base of pyramid (BOP) businesses or Japanese small and medium-sized enterprises (SMEs) that are expanding internationally, NPOs, or grassroots development activities such as volunteering.

◆ Considering the importance of nurturing young talent, applications are encouraged that propose research teams whose principal investigator is a young researcher under 45 years old or on which more than half of the researchers in the research team in Japan (researchers listed in Form 3) are researchers under 35 years old.

◆ As part of promoting diversity, proposals by female researchers are particularly welcome. The active participation of female researchers in research teams is also encouraged.

◆ There are expectations for systematic initiatives based on the partner country's policies and needs, and incorporating the partner country's government agencies and similar entities in the proposal.

Research plan:

◆ Proposals that are expected to contribute to resolving social issues through the proactive utilization of ICT in research or implementation are encouraged.

◆ Utilization of research institutions and universities that have previously been developed by Japan's ODA and outstanding research sites in relevant regions is encouraged as a strategy for research to make the utmost use of the features of ODA recipient countries.

◆ Proposals similar to the projects that have previously selected will be reviewed based on viewpoints such as whether noticeable differences exist in terms of aspects of the research objective, target, approach, region of implementation, etc. or whether a greater contribution to the resolution of global issues can be expected under competitive implementation with existing similar projects. In particular, proposals that build upon the research target and region of implementation of earlier projects will be studied carefully in terms of to what extent they bring new contribution to the resolution of the issues.

◆ Proposals founded on a sound experience working with the partner country in question are encouraged.

Please see Section 4.3 (Requirements of an ODA project).

Chapter 3 Promoting Research after Selection

3.1 Interim period

After provisional selection, in the period before the signing of documents such as the R/D and CRA marking the official start of joint research (the interim period), the principal investigator and study participants shall go ahead with preparations for international joint research, with a view to the rapid exchange of documents of agreement. Specifically, they shall participate in a Detailed Design Study for JICA that will be implemented in the partner country, participate in meetings held prior to this in Japan (several times), prepare a Research Plan and other documentation, and coordinate with research institutions in the partner country that are concerned with the Detailed Design Study and with the preparation of materials for the Research Plan and other documentation. Please refer to Section 4.6.2 (Preparing for a Detailed Design study), for the schedule and other details of the interim period.

During the interim period, the principal investigator's institution shall conclude an Interim Contract Research Agreement with the JST and may incur JST contract research expenses within the amount budgeted in the proposal, limited to the costs of preparing the above international joint study (e.g. domestic and international travel costs of Japanese researchers during the interim period). While the agreement with the principal investigator's institution is an Interim Contract Research Agreement, no Contract Research Agreements will be concluded with joint research institutions, and joint research activities during the interim period are limited to activities such as requested visits from the principal investigator's institution.

For details of the execution of JST contract research expenses in the interim period, please refer to the FY2022 Contract Research Agreement Administration Manual on the following website.

https://www.jst.go.jp/contract/index2.html

However, the signing of the R/D may not be completed before the end of the year in which the project would be implemented (the end of FY2023). Even if a research project has been selected, if the R/D is not likely to be signed in the near future, circumstances may make it impossible for the research to be implemented. Please note that if it becomes impossible for the R/D to be signed, the selected research project cannot be implemented, and from that point, JST shall no longer provide research funding.

3.2 Creating a research plan

a. After provisional selection, in the period leading up to the signing of documents such as the R/D and CRA (between provisional selection and the end of that FY), the principal investigator shall draw up research plans, beginning with the Provisional Research Plan. In parallel, he or she shall draw up an Overall Research Plan that covers the entire period of the research project. The principal investigator also draws up an Annual Research Plan each year. Research plans shall include budgets for research expenses, composition of the research team, and overall plans for the international joint research.

b. Each research plan (both Overall Research Plan and Annual Research Plans) is finalized after liaison with and confirmation by the Research Supervisor. The Research Supervisor shall offer advice, make adjustments, or give instructions as necessary for matters concerning the research plans based on the selection process, exchanges of opinions with the principal investigator, familiarity with daily progress in the research, and results of project evaluations. Major decisions, such as significant changes to research plans, may need to be examined by the program committee.

c. When making decisions on project research plans, Research Supervisors may make adjustments between projects for reasons such as accomplishing the overall goals of the research area.

3.3 Contract Research agreement

a. In the period between provisional selection of a project and formal selection, JST concludes a Contract Research Agreement only with the principal investigator's institution. However, after JICA has signed the R/D with the research institution etc. in the partner country and memorandums (MOU etc.) concerning the implementation of joint research have been come into effect (following formal selection of the project), JST concludes Contract Research Agreements with both the principal investigator's institution, and where necessary, the lead joint researchers' institutions. The research institute, in principle, must conclude a Research Agreement under the terms and conditions indicated by JST. The research institute will be obligated to conduct the research in proper accordance with the Research Agreement, Administrative Procedures, and Research Plan.

b. If it is not possible to conclude a Contract Research Agreement with a research institution, or if it is not possible to put in place a setup to control and audit the use of public research funding, or alternatively, if there is significant instability in an institution's finances, it may not be possible to implement the research at that institution. If JST deems certain measures necessary as a result of investigations of the research institute's administrative structure or financial conditions, the research institute must comply with said measures, including changes to the payment method of the contract research expenses and the reduction of research expenses. For details, please refer to 3.6 "Responsibilities of principal investigator and lead joint researchers".

c. When a national or public research institute concludes a Contract Research Agreement, if prior budgetary or other measures are required due to the Public Accounting Act or other regulations, the institute must take responsibility for completing the procedures for such measures etc. before the commencement of the Contract Research Agreement. If, after concluding the Agreement, it is discovered that the measures have not been implemented, it may be necessary to revoke or terminate the Contract Research Agreement and take measures for the return of all or part of any contract research funds disbursed.

d. Intellectual property rights, such as patent rights resulting from research, in principle, belong to the relevant research institution in accordance with the Contract Research Agreement provided that the research institution complies with the items set forth in Article 19 (Bayh-Dole clause of Japanese version) of the Industrial Technology Enhancement Act. However, this does not apply to overseas research institutions.

3.4 JST Research Funds

JST provides research funds which consist of direct costs as well as indirect costs (in principle, 30% of direct costs) to the research institution as contract research budget based on the Contract Research Agreement. Please refer to 3.1"Interim Period" for JST's contract research budget during the interim period.

3.4.1 Direct costs

Direct costs refer to costs that are directly required to carry out research, and can be used for the following purposes:

a. Commodity costs: Costs for purchasing new facilities (* 1), equipment, consumables, etc.
b. Travel costs: Travel costs for the researchers and research participants set forth in the research plan
c. Personnel costs and rewards: Personnel costs and rewards for research participants, excluding researchers
d. Others: Research results presentation costs (posting fee etc.), equipment leasing costs, transportation costs, costs for outsourcing non-research work (buyout expenses) (* 2)etc.

* 1 The purchase of new research facilities and equipment will proceed according to a "system for the joint use of research facilities and equipment for each research institution" (hereinafter referred to as the "equipment joint use system"). The equipment joint use system should be operated based on "Introduction of new research facilities and equipment system integrated with the management of research institution" (Advanced Research Base Subcommittee, Council for Science, Technology, November, 2015). For details, please refer to 5.12 "Promoting the joint use of research facilities and equipment" .

(Note) Example of costs that cannot be expended as direct costs
・Costs that do not meet the research purpose.
・Expenditures as indirect costs are considered appropriate.
・Costs determined to be inappropriate by JST in the settlement of contract research costs etc. (*)

(*) For some costs, JST has program-specific rules and guidelines in the form of the Contract Research Agreement, administration manuals or the cross-ministerial cost categorization table. Some costs are handled differently between universities (the universities, public research institutions and public-service corporations accepted by JST) and companies (mainly the research institutions of private enterprises other than universities).
For details, please refer to the latest administration manuals at the following URL:
https://www.jst.go.jp/contract/index2.html

*2 In institutions such as universities, in principle, the personnel costs and the costs entailed in covering tasks other than those of research (buyout costs) may be disbursed to persons who are a principal researcher on a project funded competitively by the JST, only in the event that certain conditions are met. Please see the required conditions below.

○ Review of the possibility of disbursing costs to cover tasks other than research from direct costs (introduction of buyout system) and disbursement of personnel costs for principal

investigators (PIs) from direct costs (communication) (September 17, 2020)
https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf (in Japanese)

○ Handling of the possibility of disbursing costs to cover tasks other than research from direct costs (introduction of buyout system) in international science and technology programs dealing with global issues (SATREPS)
https://www.jst.go.jp/global/pdf/buyout_houshin_kokusai.pdf (in Japanese)

○ Disbursement of personnel costs for principal investigators (PIs) from direct costs in international science and technology programs dealing with global issues (SATREPS)
https://www.jst.go.jp/global/pdf/pi_houshin_kokusai.pdf (in Japanese)

3.4.2 Indirect costs

Indirect costs are costs required for the management of research institutions pursuing research; they are, in principle, capped at 30% of direct costs. Research institutions are required to create policies regarding the use of indirect costs and execute them systematically and properly to ensure that the use is transparent in line with the “Common Guidance for the Execution of Indirect Costs of the Competitive Fund” (agreed upon by the coordination committees of relevant ministries and agencies on competitive funds on April 20, 2001 and revised on October 1, 2021).

3.4.3 Multi-fiscal year contract and carryover

From the perspective of the effective and efficient use of research expenses to maximize research results and prevent misconduct, JST concludes a multi-fiscal year Contract Research Agreement (the fiscal year concerned and the following fiscal year)so that research costs can be carried over across the next fiscal years, or a procurement contract that spans the fiscal years can be concluded (The handling of the carryover system varies depending on the universities and companies, and the multi-fiscal year contract and the carryover may not be permitted due to the administrative management system of a research institution).

3.5 Evaluation

Evaluation of projects is handled jointly by collaboration between JST and JICA. JST project evaluation follows the procedure set out in following Guidelines, and JICA performs periodical monitoring as part of JICA's project management processes.

For JST project evaluation, the following types of evaluation are conducted;

a. Mid-term Evaluation, conducted in or about the middle year of the period of international joint research (the third year of a five-year project)
b. Terminal Evaluation, conducted before the end of the research period
c. Follow-up Evaluation, conducted a certain period after the research period has ended (JICA uses the term "ex-post evaluation" for follow-up evaluations)

Mid-Term Evaluation:
https://www.jst.go.jp/global/english/hyouka/pdf/mid-evaluation-procedure.pdf
Terminal Evaluation:
https://www.jst.go.jp/global/english/hyouka/pdf/end-evaluation-procedure.pdf

Follow-up Evaluation (only in Japanese):
https://www.jst.go.jp/global/hyouka/pdf/follow-up-evaluation-procedure.pdf

The JST Evaluations are published as reports and made available online. The findings of the Mid-term Evaluation in particular are used as the basis for subsequent adjustments to research plans and allocation of resources (including changes to budgets for research expenses and to the composition of the research team). In some cases, this may lead to measures such as adjustment between research projects or termination of a Contract Research Agreement. For research projects of less than five years, the necessity for conducting a Mid-term Evaluation will be decided following discussion between the people and entities involved in the specific project. For details of evaluation by JICA, see section 4.9 “Project Monitoring”.

3.6 Responsibilities of principal investigator and lead joint researchers

The following responsibilities will take effect for the principal investigator (etc.) upon provisional selection.

3.6.1 Leading and managing the research

a. The principal investigator must assume responsibility for the entire international joint research for the full duration of its implementation. The principal investigator, based on his or her own research concept, must be able to form a research team best suited to the implementation of the research subject, and exercise leadership while engaging directly in the research subject. Under this program, research teams may be formed including researchers affiliated with other research institutions in Japan (including private enterprises, etc.) and researchers specializing in other research fields, including the humanities and social sciences, and conduct joint research with research institutions in developing countries.

b. The principal investigator must act as the leader of the project under JICA technical cooperation to oversee and liaise with the counterpart and others to coordinate the planning and implementation of Japan's inputs (including experts dispatch, acceptance of trainees, provision of machinery and equipment), reporting regularly to JST/JICA, submitting to JST/JICA’s project appraisal, and appropriately managing the execution of the project, and must manage and control the SATREPS project as a whole. As a rule, unilateral termination of the research activity at the principal investigator’s wishes midway through the implementation period will not be allowed.

c. After provisional selection, the principal investigator must be able to attend meetings in Japan with JST/ JICA (three to five times) and to visit the prospective ODA recipient country in a part of JICA’s Detailed Design Study (approx. 10 to 14 days during the period between August and October 2023).

d. The principal investigator shall be responsible for research, for planning and implementation of inputs, and in the case of a research team being formed in Japan, for that research team. In planning and implementing the dispatch of joint researchers and provision of machinery and equipment, the principal investigator shall take particular care to ensure full communication with the counterpart country, and to secure roles for young researchers from both Japan and the partner country. The principal investigator shall also attend meetings of the Joint Coordinating

Committee (JCC) held in the developing country to report on progress of the research and discuss operation and management.

e. The principal investigator shall submit reports and other materials required by JST/JICA and submit to project appraisal by JST/JICA. The principal investigator shall also report on the progress of research whenever requested by the JST/JICA.

f. The principal investigator shall be responsible for consensus-building, Information sharing, and coordination with administrative offices and other entities within the research institution.

g. This fund is supported by the Government of Japan. Therefore, the principal investigators are encouraged to actively publicize research outcomes both domestically and internationally while taking into consideration the handling of intellectual property rights.

h. If any result achieved through the research project is to be publicized in a paper or other form or presented at a conference or other venue, it should be indicated that the outcome has been achieved with support of the JST/JICA Science and Technology Research Partnership for Sustainable Development (SATREPS).

i. Taking into account that this is an international joint research initiative, the principal investigators are required to actively acquire intellectual property rights where that is not to the disadvantage of the partner. In principle, applications for intellectual property rights shall be conducted by the institution on the basis of the Contract Research Agreement.

j. He or she is expected to participate in workshops or symposia organized by JST/JICA and make a presentation of research outcomes.

3.6.2 Compliance with research agreement etc.

Each principal investigator shall comply with the research agreement between JST and research institutions, other JST rules and regulations, JICA's Agreement for Technical Cooperation and project contract, the R/D concluded between JICA and counterpart research institutions, and CRA related to the joint research concluded between research institutions.

3.6.3 Submission of documentation confirming compliance

After a project proposal has been selected, the principal investigator will, via an explanatory meeting held by JST, confirm compliance with the following items, and notify JST in writing that compliance has been confirmed.

a. Compliance with the requirements of the Application Guideline

b. The research funding provided by JST is paid for from national taxes. The principal investigator must promise not to act in an illicit manner or make illicit use of anything in the course of the research.

c. In order to prevent misconduct by researchers and others participating in the project, the principal investigator shall commit to publicizing the obligation to study the research ethics course stipulated by JST (e-APRIN (formerly known as CITI) and ensuring that the content of the course is understood.

3.6.4 Obligation to review teaching materials on research integrity

To prevent the occurrence of misconduct in research, researchers and other participants must

review the teaching materials on research integrity (online materials) designated by the JST. For details, please see the following website (only in Japanese).
https://www.jst.go.jp/researchintegrity/education.html#M2

3.7 Responsibilities of research institutions, etc.

In conducting research, the research institutions must be fully aware that the funds for contract research costs are public funds. So, they must comply with relevant laws and regulations, and strive to carry out research efficiently. Research institutions that fail to fulfill the responsibilities listed below are not eligible to perform research. At the time of application, please be sure to obtain prior consent from all research institutions planning to conduct research (hereinafter referred to as "participating organizations").

a. Research institutions shall, in principle, enter into a research agreement with the contents presented by JST. They have an obligation to carry out research properly in accordance with the research agreement, administration manuals and the research plan. If the research agreement cannot be concluded or if JST determines that the research will not be conducted properly, the research implementation at the relevant research institution is not permitted.
* For the latest template for the Contract Research Agreement, please visit the following URL:
https://www.jst.go.jp/global/itaku.html (only in Japanese)

b. The research institution must secure a structure for conducting the research. Also, the director of the institution must give maximum consideration to the status of the principal investigator during the term of the research. The director of the institution is considered to be the president or chair of the board or other person with responsibility for the whole of the institution, or in the case of entities such as private-sector corporations, it should be a person in a position of responsibility to ensure the required support and setup throughout the period of research. It does not normally include executives or management at a lower level in the organization, such as general managers, directors of divisions or centers, or heads of departments.
[See: Form7(on page136)]

c. Based on "Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)" (Adopted by the Minister of Education, Science, Culture, Sports, Science and Technology on February 15, 2007, revised on February 18, 2014), the research institutions shall establish a system for managing and auditing the public research funds under their responsibility and strive to execute the contract research costs properly. The research institutions have an obligation to report the implementation status, including the state of establishing a system for managing and auditing the public research funds, regularly to the Ministry of Education, Culture, Sports, Science and Technology and respond to various surveys on system establishment. (Refer to 5.27.1 "About implementation of proper systems in accordance with the Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)").
https://www.mext.go.jp/a_menu/kansa/houkoku/1343904.htm

d. Based on "Guidelines for Responding to Misconduct in Research (Adopted by the Minister of Education, Culture, Sports, Sciences and Technology on August 26, 2014)," the research

institutions shall establish necessary regulations and systems under their responsibility, and strive to prevent misconduct. Research institutions have an obligation to respond to various surveys on system establishment based on the guidelines. (Refer to 5.28.1 “About implementation of proper systems in accordance with Guidelines for Responding to Misconduct in Research”).

https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

e. Research institutions have an obligation to make research participants fully aware of the contents of the guidelines set forth in “c” and “d” above, and have them learn materials related to the research integrity defined by JST.

f. In executing research expenses, the research institutions shall spend and manage them properly in accordance with its own regulations while taking flexibility in consideration. For items for which program-specific rules are provided in the JST’s administration manuals, the research institutions shall follow these rules. (For items not set forth in the administration manuals regarding the use of contract research grants, a research institution that receives it may follow the rules for handling it at its own discretion.)

g. The Principal investigator’s institution, as the body which implement ODA technical cooperation, are required to act in accordance with R/D, etc. Only the principal investigator’s institution will sign the Agreement and project contract with JICA and promise to run the project; however, other research institutions involved in the research project are required to provide support for activities in accordance with the R/D, etc. The principal investigator's institution, acting as the principal investigator's institution for the Japan side, must oversee the activities of Japan side researchers in the partner country to ensure that they are conducted appropriately, and in addition, concerning the Agreement with JICA, must handle project operations and accounting operations appropriately in accordance with the Agreement, project contract, and “SATREPS Project Jisshino Tebiki (only in Japanese)” stipulated by JICA (including reporting to JICA as required).

h. Research institutions shall exchange an agreement with the research participants stating that the intellectual property right arising out of research belongs to the research institutions, or establish job rules stating the same. In particular, if a student without an employment relationship with a research institution participates in a research there, the research institution should preliminarily take necessary measures, such as signing an agreement with the student to ensure that intellectual property rights pertaining to invention (including ideas) made by the student during the research belong to the research institution unless the student is not clearly able to become an inventor. In the case of assignment or transfer of an intellectual property right from a student, an inventor, the research institution should take a proper care of his/her compensation so that he/she will not be disadvantaged.

In addition, in the case of transferring an intellectual property right or setting a dedicated license for the intellectual property right, the research institution shall, in principle, obtain prior approval from JST. In the case of applying for, registering, implementing or abandoning patent rights, the research institution has an obligation to make required reports to JST and JICA.

i. Research institutions have an obligation to respond to accounting investigations by JST/JICA and account audits by the Government.

j. Research institutions shall follow measures, such as changing the terms of payment or reduction in payments, decided upon by JST based on JST investigations on the administrative management system, financial conditions, etc.

Depending on the results of the program evaluation at the end of the JST's mid- and long-term objective periods, it may be called for dissolution or contraction. In the case of any changes to national budgetary measures, JST may take such measures as contract termination or reduction in contract research expenses, during the term of the contract pursuant to the special provisions of the Contract Research Agreement. Based on the results of the mid-term evaluation, etc. of the research project, JST may take measures, such as changing the contract research funds or the contract period or cancelling the research. If JST determines that the continuation of research is not appropriate, it may take measures, such as cancellation of the contract even during the term of the contract. The research institutions need to follow these measures.

k. If a research institution which is a national or municipal organization concludes a Contract Research Agreement, the research institution shall implement necessary budgetary measures before the start of the Contract Research Agreement under its responsibility. (In the case where it becomes apparent that necessary procedures have not been performed after the conclusion of the agreement, JST may take measures, such as cancellation of the Contract Research Agreement, refunding of the contract research costs, etc.)

l. As part of efforts to prevent misconduct during research activities, JST requires researchers, etc. who participate in newly selected research projects and belong to the research institutions to receive and complete educational materials on research integrity. (Mandatory procedures required for attendance will be conducted by JST). The research institutions shall ensure that the target people attend and complete it.

If a researcher, etc. fails to fulfill the duty to complete the education, despite repeated requests from JST, JST will instruct the relevant research institution to suspend the execution of all or part of the contract research funds. The research institution shall stop expending the research funds in accordance with the instruction and shall not resume the execution until instructed.

m. Apart from the R/D, the principal investigator's institution must sign a Collaborative Research Agreement (CRA) with the research institution in the partner country regarding the international research collaboration. The CRA should include the treatment of intellectual property rights, handling of confidential information, publication of research results, warranty and indemnification, and access to and transfer of the partner country's bio-resources[13]. A draft of the document should be checked by JST before signing. It is best to sign and exchange CRA simultaneously with the signing and exchange of R/D between JICA and the institution(s) of the ODA recipient country in order to match the content with the R/D. All researchers and members in the research team in Japan shall observe the CRA signed by the principal

[13] Genetic resources refer to genetic material of actual or potential value (materials derived from plants, animals, microorganisms, etc. that contain functional units of heredity) (Article 2 of the Convention on Biological Diversity), Almost all animals, plants and microorganisms above are included in genetic resources.

investigator's institution.

[See: 5.20.1]

n. A research institution entering a Contract Research Agreement with JST wishing to include researcher(s) not affiliated with that institution must exchange appropriate documents between the two institutions in order to ensure compliance with the JST Contract Research Agreement, Joint Research Agreement and content of R/D (e.g. When a researcher affiliated with University B is to participate on a research team at University A which has entered a Contract Research Agreement with JST). For details see "Handling in cases where researchers affiliated with other institutions are to engage in contract research" below.

https://www.jst.go.jp/global/keiyaku/seiyaku2019_2.pdf (only in Japanese)

o. Since the contract research budget is funded by national funds, the research institutions shall take appropriate measures to fulfill their accountability in consideration of economics, efficiency, effectiveness, legality, and accuracy. The research institutions shall strive to execute them in accordance with a plan and shall not procure something to consume budgetary funds at the end of the research period or at the end of the fiscal year.

3.8 Human resource development

3.8.1 Japanese Government (MEXT) Scholarship Program

MEXT has a "SATREPS Section" within its Japanese government scholarship program (University Recommendation) for SATREPS projects. The aim of the SATREPS Section is to facilitate the development of young researchers with the potential to be future key players in relevant research in their own countries by studying or conducting research as a research student and taking a doctorate at a Japanese institution. Invitation for this Japanese government scholarship program is implemented by MEXT, and scholarship is budgeted separately from SATREPS. For more details, please refer to the Japanese government (MEXT) scholarship program website. Please note that this scholarship program may be altered depending on the final budget.

○Japanese government (MEXT/Monbukagakusho) scholarship program

https://www.mext.go.jp/a_menu/koutou/ryugaku/06032818.htm(Japanese)
https://www.mext.go.jp/en/policy/education/highered/title02/detail02/sdetail02/1373897.htm (English)

3.8.2 Acceptance of foreign researchers under ODA project costs

There is also the "acceptance of trainees" system (which is called "acceptance of foreign researchers" in the SATREPS program) for inviting researchers from the ODA recipient country to Japan using the ODA project expenses. The researchers are invited from the research institution carrying out the international joint research in the developing country to Japan, where they carry out research. It is hoped that such researchers will play a long-term key role at their research institution after their return from Japan. They are considered as indispensable for promoting the joint research. Please note that the acceptance of foreign researchers under this system is normally conditional on the researcher's period of research in Japan terminating within the period for joint

research specified in the R/D. In light of the effect of the COVID-19 pandemic, as of August 2022, foreign nationals are only permitted to enter Japan for the first time if there are “special exceptional circumstances.” Please be aware that when entering or re-entering Japan, you will be required to follow the border enforcement measures in effect at the time from the perspective of epidemic prevention.

3.8.3 Childbirth, Child Care and Nursing Care Support System

JST operates “childbirth, childcare, nursing care support system” as part of its efforts to promote gender equality. This system is intended to support researchers who are full-time employees of JST, whose pay comes from the research funds (excluding indirect costs) of a JST program, to continue their research at various stages of life (when giving birth, raising children and providing nursing care) or resume their research activities whenever they wish if a temporary interruption is unavoidable. In this system, JST pays “gender equality promotion fund” (maximum amount: JPY300,000/month × the number of months supported) for the research projects.

For details, please visit the following website:

https://www.jst.go.jp/diversity/about/research/child-care.html (only in Japanese)

3.8.4 Using JREC-IN Portal

The researcher human resources database (JREC-IN Portal: https://jrecin.jst.go.jp/) is one of the largest portal sites supporting the career of research human resources in Japan. It is a free service to carry information on human resources including researchers, their supporters and engineers for viewing.

At present, the database has more than 130,000 registered users, and publishes more than 19,000 annual job postings for universities, public research institutions, private companies, etc. In addition, by using the WEB application feature etc. of JREC-IN Portal, it is possible to simplify the management of application documents and reduce the burden on job seekers. To find research personnel (post doctors, researchers, etc.) having an advanced knowledge in promoting research projects, please use the JREC-IN Portal.

Moreover, JREC-IN Portal is linked to researchmap, and the resume and achievement list creation function allows application documents to be created easily using the information registered on researchmap.

Chapter 4 Outline of technical cooperation through ODA

Before you apply for this program, please ensure that you fully understand the following since this program is implemented using the ODA framework.

For reference, please also read “Terminology of ODA” at the end of this chapter.

4.1 What is official development assistance?

Official Development Assistance (ODA) is development cooperation using public funds in the forms of financial support and technical cooperation provided by donor governments or their implementing agencies to recipient countries, aiming to contribute to the promotion of the economic development and welfare of developing countries as well as the stabilization of people’s livelihood. Japan joined the Colombo Plan[14] in 1954 and at the same time started providing development-cooperation. Japan has been providing economic and technical cooperation to developing countries ever since.

The Japanese government sets forth its philosophy on ODA, priority policy, and the framework for implementing its ODA policy in its “Development Cooperation Charter”(February 2015). In the Development Cooperation Charter, having asserted that "global challenges cannot be dealt with by a single country and require united efforts at the regional level or by the international community as a whole," Japan states, "Japan will take the lead in addressing these challenges...Through these efforts, Japan will seek to contribute to building a sustainable and resilient international community."

4.2 What is technical cooperation?

JICA aims to contribute to the promotion of international development cooperation and sound economic growth of Japan and the international community by contributing to the socioeconomic development, recovery and economic stability of developing countries. JICA’s activities include: technical cooperation (acceptance of trainees, expert dispatch, provision of machinery and equipment, etc.), loans and grant aid, the promotion of cooperation activities by Japanese nationals (dispatch of Japan Overseas Cooperation Volunteers, etc.) and international disaster relief.

Technical cooperation provides technical assistance, based on the international agreement with the developing country, in order for the developing country to develop the capacity to address development issues independently, comprehensively, and spontaneously through institutional development, organizational reinforcement, human-resource development, etc.

A form of technical cooperation is a technical cooperation project, which is key activity to be conducted by choosing the best combination of “acceptance of trainees” “expert dispatch” and “provision of machinery and equipment”. JICA pursues best outcomes by engaging in technical cooperation in a planned and comprehensive way from planning through implementation to the assessment of outcomes and by working together with relevant institutions in recipient countries.

The current Science and Technology Research Partnership for Sustainable Development To JICA, the Science and Technology Research Partnership for Sustainable Development (SATREPS) program is a program for international joint research between research institutes in Japan and research institutes in partner countries using the technical cooperation project framework. In contrast, ODA

[14] A cooperation organization established in January 1950 for the purpose of promoting economic and social development in South Asia, Southeast Asia, and the countries of the Pacific region.

projects aim to transfer Japanese technology, skills, and knowledge to a developing country or to support the development or improvement of technology appropriate to that country's situation, and also to contribute to aspects such as raising its technological level and the establishment and maintenance of systems and organizations.

For details on SATREPS project implementation, please refer to the following:
JICA "Science and Technology Research Partnership for Sustainable Development (SATREPS) Project Jisshino Tebiki (only in Japanese)"
https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/general_01.pdf

4.3 Requirements of an ODA project

As described in the previous paragraph, technical cooperation projects have the objective of contributing to the economic or social development, etc. of the developing region and to the progress of the international community, and they must be operated and implemented in a planned and comprehensive manner. For SATREPS projects, too, utilizing the outcomes of research to contribute to resolving issues in developing countries is also emphasized, as is an implementation framework in the partner country as well as in Japan and sustainability after the conclusion of the project. When proposing a research project, please therefore pay particular care regarding the following points.

・Does research cooperation align with the Country Assistance Policy, and is the theme concerned a high priority/need for the partner country government?

*For Country Assistance Policies, see the Foreign Office website (only in Japanese) (https://www.mofa.go.jp/mofaj/gaiko/oda/about/seisaku/index.html).

*JICA has also formulated the JICA Global Agenda, and set out the issues with which it is involved in each sector on its website (https://www.jica.go.jp/activities/index.html). Please review the sector concerned and reflect this in the research plan.

・Does the framework comprise implementation of the research, followed by utilization of research outcomes for the benefit of society, and does it have the aims of human resource training and improving organizational capacity for the partner country?

*Research cooperation includes not only research but also utilization of research outcomes for the benefit of society (content, timing, framework, method, and realization of objectives).

・Are there any issues with safety or public security in the area where the activities are to be conducted?

*For safety information on the site of research cooperation, please see the Foreign Office website (only in Japanese) (https://www.anzen.mofa.go.jp).

・Is the partner country research institution/responsible government department or associated entity the appropriate agency to conduct research and take responsibility for utilization of research outcomes for the benefit of society, and has sufficient understanding been obtained from the partner country?

*If the partner country research institution is inadequate as the entity to undertake utilization of research outcomes for the benefit of society, there must be a plan for a private company or public

institution in the partner country that can take responsibility for such utilization.

・Is the content of the research and its approach appropriate/valid in order to achieve the initial goal at the conclusion of the research cooperation/to generate the results that should be achieved 3–5 years after the conclusion of the research cooperation?

・Is the plan for utilization of research outcomes clear and of evident feasibility?

*Although it may not be possible to achieve the complete utilization of research results in society during the research period, the proposed plan for their utilization in society during the research period, such as how the research results envisaged in the research plan will be utilized in society, must be specific (entity responsible for promotion/adoption, framework, activities by the partner country, proposed plan for their adoption in other regions or cities).

*The JICA website has a collection of case studies on its website (https://www.jica.go.jp/activities/schemes/science/faq/index.html), including how the results of research have been utilized in society in previous SATREPS projects and factors in their success. Please review these case studies and seminar videos and be sure to include a plan for the utilization of the research results in society when formulating your research plan.

4.4 Framework for implementing a technical cooperation project

JICA's technical cooperation project is conducted jointly with recipient countries. Recipient country ownership is important in promoting the country's independence and development. Recipient country's principal investigator's responsibility as project manager is as serious as the Japanese principal investigator's responsibility as project leader. (See Figure 4.) Furthermore, Joint Coordinating Committee (JCC) is established and meets on a regular basis to discuss and solve issues so that joint research is conducted smoothly. JCC, as a general rule, consists of related parties from the Japan and recipient country's sides (the Japan side: the Embassy of Japan, the head (Resident Representative) of JICA overseas office, the principal investigator, researchers, project coordinators, etc.; the recipient country's side: ministry and agency responsible for ODA, ministry and agency controlling research institutes, related authorities, research institutes, etc.). Given that this program is international joint research, JCC shall be operated jointly by the Japan and recipient country's sides.

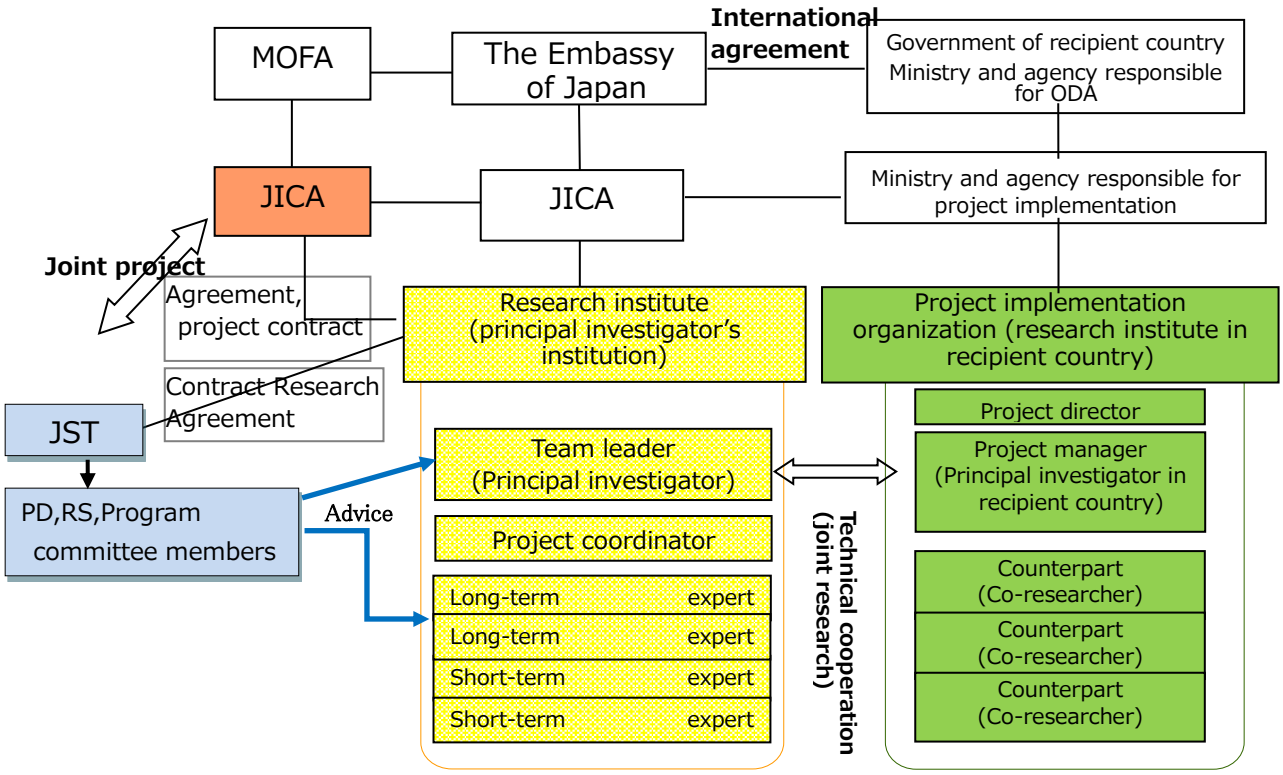


Figure 4. The framework for implementing a technical cooperation project (example)

4.5 Overall flow of technical cooperation projects

Please see Overall flow of technical cooperation projects (page66).

4.6 Flow up to technical cooperation project commencement

4.6.1 From the submission of a request for ODA Technical cooperation to the examination and adoption of a project

JICA's technical cooperation is initiated at the receipt of requests from developing countries.

Japan's ODA involves a process called "request survey", in which a research institute in a developing country wishing to obtain technical cooperation from JICA for a new project to be launched in and after the following fiscal year is invited to submit a request. The actual procedures are as follows: a research institute that wishes to launch a new project under the framework of JICA's technical cooperation prepares a request form, gains approval from competent authority and submits the form through the country's ministry responsible for ODA to the Embassy of Japan in the country. Then, the Embassy of Japan forwards the request form with other necessary documents to the Ministry of Foreign Affairs (MOFA) in Japan.

Upon the receipt of the request, the government of Japan screens the requested project and when it is deemed that the project should proceed, a project selection notice is sent to the recipient country's government by the Embassy of Japan and international agreement is made between Japanese government and the recipient country's government (The Embassy of Japan in the recipient country and the recipient country's responsible authority issue a verbal note, etc.)

The acceptance process for SATREPS projects involves project screening by the screening committee formed by JST only of projects for which both a request for cooperation from a requesting country and a proposal from the Japanese side principal investigator's institution have been received (no screening will occur if only one has been received), as well as the government of Japan sending a project selection notice to the recipient country's government by way of the Embassy of Japan. And, as mentioned above, the selection will be provisional until a Record of Discussions (R/D) is signed.

All requests for cooperation regarding the SATREPS program for fiscal year 2023 must be received by Japan's Ministry of Foreign Affairs (MOFA) in Tokyo **on Friday October 28, 2022(Japan time).**

Please note that requesting countries' governments usually set an application deadline before the above-mentioned deadline. So please bear that in mind when you coordinate schedules with research institutes in requesting countries. As in the deadline for research proposal through e-Rad system, requests received after the deadline will not be considered.

Regardless of requests submitted by FY2022, a country wishing to apply for project selection for FY2023 is required to submit a request form again. Please note that requests not received by the deadline will not be considered even if the research proposal has been submitted.

4.6.2 Preparing for a Detailed Design study

After a project selection notice is sent from the Embassy of Japan to the recipient country's government, and a note verbal is exchanged, JICA conducts a Detailed Design (D/D) study. The D/D study is to examine the current status of possible cooperation field and the background to a request for cooperation. During the process, JICA discusses with the requesting country's related parties on basic project plans, implementation structure and responsibilities of donor and recipient countries, and what was discussed during the meetings is summarized in a Minutes of Meeting (M/M) to be signed by the both parties. The principal investigator who manages the Japan research team (i.e. the project leader) is required to participate in the D/D study. In addition, in the D/D study, the expected outcomes from the planned project are more clearly identified and ex-ante evaluation is performed to examine the appropriateness of the project comprehensively.

If the study discovers significant issues concerning the requesting country's implementation structure or responsibilities, etc. and it is judged that they would make it difficult to implement the project as planned, significant revisions to the plans are required and it may be necessary to consider abandoning the plan altogether.

4.6.3 Signing a Record of Discussions (R/D)

After completing the D/D study, JICA prepares a Record of Discussions (R/D) to be signed by JICA and an implementing agency of the recipient country, while going through the approval process. The R/D is an official agreement on the implementation of a project, specifying the details of project activities and necessary measures. In concluding the R/D, ensuring consistency with the contents of the research proposal, JICA also prepares a Project Design Matrix (PDM) which indicates the cause and effect relationship of inputs, activities, outcomes, and goals (logical

framework), and a Plan of Operation (PO), defines the cooperation period of the project, and then submits them to the recipient country for confirmation. The PDM and PO will be a part of the R/D as attachments. Once the R/D is signed, the SATREPS project's selection status changes from provisional selection to selection.

*Please see Chapter 5 of the Project Management Handbook (JICA Research Institute) for PDM and Chapter 6 for PO. (Only in Japanese)

https://www.jica.go.jp/jica-ri/IFIC_and_JBICI-Studies/jica-ri/publication/archives/jica/field/200712_aid.html

	Typical timeframe
Prepares for a Detailed Design study (meetings, contract with consultant (members responsible for evaluation analysis), formalities for dispatching research group)	About 2.5 months
Conducts the Detailed Design study (local survey), signs M/M and reports on the study in Japan	About 0.5 - 1 month
JICA performs ex-ante evaluation	About 1.5 - 2 months
The R/D is signed (between the head (Resident Representative) of JICA overseas office and competent authority or the head of research institute in the recipient country)	About 0.5 - 2 months

Timeframe from the provisional selection through the signing of an R/D to the launch of the project

4.7 Flow following technical cooperation project commencement

4.7.1 Agreement concluded between JICA and the principal investigator's institution

After the R/D has been signed, the institution with which the principal investigator of a project selected for this program is associated signs a Contract Research Agreement with JST and is also required to sign three documents with JICA: **(a) an "agreement regarding the implementation of technical cooperation under the framework of SATREPS" (hereinafter referred to as "the Agreement), (b) an Annex attached to the Agreement, and (c) a project contract**. Representing partner research institutes in the selected project in the Japan side, the principal investigator's institute signs these documents with JICA. Please note that JICA does not sign these documents with any other research institutes but the research institute the principal investigator is affiliated with.

The Agreement that JICA signs with principal investigator's institute specifies duties and responsibilities of JICA, the principal investigator and the principal investigator's institution regarding the selected project. The Agreement is intended to help clarify the research institute's roles and responsibilities in conducting joint research in developing countries. Please note that the Agreement concluded with JICA has to be signed by the research institute with which the principal investigator is affiliated. That is, if agreements have already been agreed between JICA and the principal investigator's institution and a SATREPS project is already underway, no new agreements

need be agreed. Even if agreements had previously been agreed, if a SATREPS project has already been completed and no such project is currently underway, agreements must be agreed again.

A new annex of agreement must be concluded for each project.

A project contract must be signed for every contract period during the 5-year project implementation period. For example, if the contract is divided into five periods, the conclusion of a contract and accounts are required for each period.

4.7.2 The Agreement

The Agreement is signed between the principal investigator's institution and JICA to stipulate the both parties' duties and responsibilities, etc. The responsibilities of the principal investigator's institution including activities of partner research institutes in the Japan side covers: dispatch of Japanese researchers to the recipient country, invitation of the recipient country's researchers to Japan, procurement of machinery and equipment and workplace health and safety promotion. In practice, although consideration is given to the investigator's institution' rules and regulations including those on accounting, where the principal investigator's institution carries out its responsibilities, the organization's rules and regulations apply to such activities.

For the form of the Agreement (the main part), please refer to the following website (only in Japanese):

https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/arrangements_01.pdf

4.7.3 The Annex of Agreement

The Annex of Agreement stipulates matters including the name of the project and the project cooperation period.

Please refer to the following website for the format for the Annex.

https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/arrangements_02.pdf

4.7.4 Project contract

(1) Introduction

The R/D is the authority for project implementation. After the R/D has been signed, a project contract is signed between JICA and the principal investigator's institution, and the project commences. The project contract may be agreed until the project completion date specified in the R/D. The required inputs, such as expert dispatch (sending research staff overseas), acceptance of trainees (accepting researchers), and provision of machinery and equipment, will be conducted in accordance with the content of the project contract.

Regular monitoring based on the R/D and its attachments, the PDM and PO, will be conducted during the project implementation period to confirm the progress of the project as technical cooperation, the appearance of research outcomes, the status of improvement of outstanding concerns at the time of selection, and the feasibility of the plan for utilization of research outcomes for the benefit of society.

The project contract is the authority for the disbursement of costs by JICA, and no costs can be disbursed by JICA during periods for which a project contract has not been signed.

(2) Project design when drawing up the project contract

The guideline figure for expenses per project for projects with no indirect expenses is 60 million yen per year, with a maximum of 300 million yen over five years. For projects with indirect expenses, it is 70 million yen per year, with a maximum of 350 million yen over five years.

Please note that because this 300 million yen (350 million yen) includes the expenses directly incurred by JICA—described in detail in the Science and Technology Research Partnerships for Sustainable Development (SATREPS) Project Implementation Guide—the project contract funding managed by the principal investigator's institution and the expenses directly incurred by JICA altogether total 300 million yen (350 million yen).

In light of this, an overall plan and plans for each period shall be formulated on the basis of mutual discussions in the process of preparing the project contract. These plans may be adjusted in accordance with the progress of the project at intermediate points during the project contract period, based on the plans for each period. The periods covered by each plan need not necessarily be within a single fiscal year, but may also be assigned to span several fiscal years. Please also coordinate the project so that none of the various activities (such as from the procurement of machinery and equipment to its delivery from the overseas dispatch of Japanese researchers to their return to Japan, or from the arrival in Japan of foreign researchers to their return to their own countries) extends from the period covered by one plan to that covered by another.

(3) The content of the project contract

The project contract stipulates the content of a project and who is responsible for expenses and accounting, and is signed for every terminal plan between JICA and the principal investigator's institution. The plan includes all the activities by the principle investigator's institution and its partner research institutions in the Japan side. Expenses shall be incurred only after the project contract is signed.

Based on the Agreement and project contract signed, the principal investigator's institution shall incur expenses and settle them within the project contract period in accordance with their organization's rules and regulations. Payments need not be made as final payments, but may be disbursed in advance as approximate payments during the contract period.

https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/contract_01.pdf

For policies and regulations concerning administration, such as expenditure items, estimation, advance payment based on the estimate, settlement, etc., see "SATREPS Project Jisshino Tebiki (only in Japanese)" on the JICA's website:

https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/general_01.pdf

(4) Costs that may be covered in the project contract

The contract amount as agreed in the project contract signed with the principle investigator's institution may only be used to cover the following costs: (a) costs of the dispatch of Japanese side researchers to the recipient country, (b) costs required for research in the partner country (c) costs of acceptance of the recipient country side researchers in Japan, (d) costs of supplying machinery and equipment needed for joint research in the recipient country, and (e) direct

administrative cost in Japan .

There are two types of project contract, those that include indirect expenses and those that do not include indirect expenses. The main difference between the two is whether or not expenses for the project coordinator, described in "4.7.5 Project coordinator" below, are included in the project contract and whether or not the "Administrative cost in Japan" is included in the project contract. Indirect expenses may be a maximum of 30% of the total of the direct expenses (a)–(e) above.

Indirect expenses not included:

- JICA secures the project coordinator and directly shoulders expenses for dispatching the project coordinator.
- The "Administrative cost in Japan" is included in the project contract.

Indirect expenses included:

- The principal investigator's institution secures the project coordinator and expenses for dispatching the project coordinator are included in the project contract.
- The "Administrative cost in Japan" is not included in the project contract. (Disbursed from indirect costs)

Brief descriptions of the expenditures to be shouldered by JICA are given below.

Cost	Brief description
a. Costs of the dispatch of Japanese researchers for overseas research from Japan to recipient country	Air fare, daily allowance, accommodation cost, sundry expenses, etc. (For those who are dispatched for more than one year, travel cost for dispatch and return, transfer allowance, other allowances, etc.)
b. Costs required for research in the recipient country	Costs required for research in the recipient country (procurement of goods, hiring local consultants, travel expenses and transportation fees for Japanese side researchers, etc.).
c. Costs of acceptance of foreign researchers (researchers in the recipient country)	Air fare, daily allowance, accommodation cost, training expenses, etc. Acceptance period is classified into two: short-term (less than one year) and long term (one year and over).
d. Costs of supplying machinery and equipment needed for joint research	Purchase cost, transportation cost and cost for set-up and adjustment. In terms of Security Trade Control, the principle investigator's institution is responsible for purchase, transportation and setup of supplying machinery. Such amount will be transferred to the partner country's government immediately upon arrival and used for joint research. Machinery and equipment to be used in Japan are not included, and the costs are covered under the JST's

	Contract Research Agreement, etc.
e. Administrative cost in Japan (Only with contracts with no indirect expenses)	Labor costs of part-time administrative workers, the cost of office supplies, etc. (excluding expenditures on research supplies).

Table 3. Expenditures to be shouldered by JICA

For the Estimation Form attached to the project contract, please refer to the Estimation Form on the following website.

https://www.jica.go.jp/activities/schemes/science/form/index.html

(5) The principles of the recipient country's responsibility to shoulder expenses

With focus on the recipient country's self-help efforts and sustainable development after the project is completed, ODA projects generally require the recipient country to shoulder certain expenditures. Please note that, in line with these practices, JICA does not offer financial support for all expenses in this program, which is conducted as part of international cooperation through ODA, but requires the recipient country to shoulder some expenses to promote its self-help efforts.

The costs to be borne by the partner country are decided on the basis of consultations between the Japan side and the partner country side, and are listed in the Record of Discussions (R/D) described in Section 4.6 (Flow up to technical cooperation project commencement) 4.6.3 [Signing a Record of Discussions (R/D)]. Examples of expenses that the partner country is requested to shoulder are given below.

The page on the JICA website shown below contains a link to the Basic Principles for Technical Cooperation English (January 2022) (PDF/236KB) (For the projects whose applications are submitted by project proponents on and after April 1, 2022) agreed between both parties in the Record of Discussions (R/D). The expenses to be borne by the partner country are listed in Section IV. Undertakings of the Counterpart. Please circulate this information to the research institution in the developing country in advance, and reach a shared understanding on these expenses to be borne by the partner country.

○「Basic Principles for Technical Cooperation」

https://www.jica.go.jp/english/our_work/types_of_assistance/tech/op_info/basic.html

The following are some of these expenses to be borne by the partner country. In particular, the maintenance and management costs for donated equipment are the responsibility of the partner country. When drawing up a project proposal with the partner country, please be fully aware that there are many different items to be borne by the partner country, including these.

- Running expenses necessary for the implementation of Technical Cooperation
- Expenses necessary for transportation within the recipient country of the equipment provided by JICA for Technical Cooperation Project as well as for the installation, operation and maintenance thereof
- Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and

any other materials necessary for the implementation of Technical Cooperation other than those prepared and provided by JICA

(6) Environmental and social considerations

ODA projects must comply with the legislation and standards on environmental and social considerations stipulated by the government of the partner country (including local governments), and with the JICA Guidelines for Environmental and Social Considerations.

Please pay attention to minimizing the effect of the conduct of the research project on the environment and the local community, by adhering to the partner country's laws, regulations, and other legislation and by holding discussions with the partner country in advance if at all possible. See also Chapter 4, page XX.

(7) Expense management

With regard to ODA project expenses, except for expenses in the recipient country that JICA directly shoulders, in accordance with the Agreement signed between the Japanese research institute and JICA, costs of execution of the project contract to be shouldered by the Japanese research institute are managed based on the regulations of the principal investigator's institution.

In JICA's ODA technical cooperation projects, no fund is directly given to the recipient country, and no financial assistance is given to such activities by research institutes in the recipient country.

Especially, since there has been some misunderstanding of JICA's policy of not directly giving project funds to research institutes in the recipient country, please ensure that the partner country is given an explanation beforehand.

4.7.5 Project coordinator

JICA generally invites the public to apply for the position of a project coordinator, and ensure that the selected project coordinator will start working at the earliest possible date after the R/D is signed. Project coordinator's responsibilities include project monitoring, expense management (including budget implementation) in the recipient country, agreements with governmental institutions in the recipient country regarding the dispatch of Japanese side researchers to the recipient country and acceptance of the recipient country side researchers in Japan and communication with the local JICA office regarding the procurement of machinery and equipment. The project coordinator is a member of the Japanese project team working together with researchers and those engaged in joint research, although the project coordinator won't be involved in research activities. JICA requires the project coordinator to share information with a representative of researchers and other team members to ensure that the project is conducted smoothly and properly. The project coordinator is dispatched by JICA when the project contract has no indirect expenses.

In cases in which the project contract includes indirect expenses, the expenses of the project coordinator are paid from the project contract and secured by the principal investigator's institution.

4.7.6 Time required from R/D signing to project commencement

This is as follows.

Process	Usual time required
Procedures for approving project implementation after the R/D has been signed, agreement between JICA and the principal investigator's institution, and signing of the Agreement and project contract	About 2 months
Procedures for selection and dispatch of project coordinators, etc.	About 6 months

4.7.7 Project monitoring

Regular monitoring of technical cooperation projects will be conducted to confirm progress based on the R/D and its attachments, the PDM and PO.As the monitoring during the period of a technical cooperation project is performed as part of the overall management of the project, the Japanese research institutions and the recipient country research institutions etc. are expected to be active participants in its process.

For the monitoring forms, please see the "Teiki Monitaringu" section (only in Japanese) at the following link.

https://www.jica.go.jp/activities/schemes/science/form/index.html

For the details of monitoring for JICA technical cooperation projects, see "SATREPS Project Jisshino Tebiki (only in Japanese)" on the JICA's website.

4.8 Measures taken by JICA to deal with misconduct

Should it come to light that the principal investigator's institution or a research institution under contract from the principal investigator's institution has engaged in misconduct in the execution of its project contract with JICA, is in a relationship with antisocial forces, or has otherwise acted unethically, JICA shall take action as required under the Agreement Regarding the Implementation of Technical Cooperation Under the Framework of SATREPS (revised and adopted on May 24, 2016 by JICA) and the contract, such as invoicing the principal investigator's institution for a penalty fee and dissolving the project contract with the principal investigator's institution.

Should researchers or others participating in the project engage in misconduct (including but not limited to data fabrication, falsification, or plagiarism) that has been factually confirmed by JICA, action shall be taken as required in accordance with the Guidelines for Responding to Misconduct in Research (adopted on August 26 2014 by the Ministry of Education, Culture, Sports, Science, and Technology), and the Guidelines (Code of Practice) on the Management and Auditing of Public Research Funding in Research Institutions (adopted on February 15, 2007 by the Ministry of Education, Culture, Sports, Science, and Technology, revised on February 1, 2021).

4.9 Contact concerning ODA

4.9.1 JICA headquarters

Office for Science, Technology and Innovation, and Digital Transformation of the JICA headquarters acts as a point of contact for inquiries concerning this project. For inquiries on

framework of ODA technical cooperation, please contact:

Office for Science, Technology and Innovation, and Digital Transformation, Japan International Cooperation Agency (JICA)

E-mail: gpgsd@jica.go.jp

JICA actively accepts requests for individual consultations to deepen proposers' understanding of ODA projects by proposers. Please note that such requests cannot be accepted after the start of the application period. Please also see the link below.

https://www.jica.go.jp/activities/schemes/science/faq/index.html

For inquiries on SATREPS Application Guideline, please contact JST or AMED..

4.9.2 JICA: domestic and overseas offices

○A list of domestic offices

https://www.jica.go.jp/about/structure/domestic/index.html (Japanese)
https://www.jica.go.jp/english/about/organization/domestic/index.html (English)

○A list of overseas offices

https://www.jica.go.jp/about/structure/overseas/index.html (Japanese)
https://www.jica.go.jp/english/about/organization/overseas/index.html (English)

4.9.3 Useful websites on ODA and technical cooperation

○Ministry of Foreign Affairs of Japan - ODA

https://www.mofa.go.jp/mofaj/gaiko/oda/index.html

○"ODA Kunibetsu Chiikibetsu Seisaku/Joho" (policy and information on ODA by country and region) (Only in Japanese)

(The website offers information for you to check whether or not your research field is in line with Japan's ODA policy in the beneficiary country and related region.)

https://www.mofa.go.jp/mofaj/gaiko/oda/region/index.html

○"JICA Technical cooperation project" (the website explains JICA ODA technical cooperation projects in general.)

https://www.jica.go.jp/project/index.html

○"JICA Science and Technology Cooperation on Global Issues" (including SATREPS)

https://www.jica.go.jp/activities/schemes/science/index.html

○"JICA Toshokan Zousho Kensaku" (JICA Library search)

(When you search by project name, Adobe PDF documents on SATREPS report publications are returned in the search result.)

https://libopac.jica.go.jp/

Terminology of ODA

Ministry and agency responsible for ODA:

The partner/requesting country's ministry and agency responsible for international assistance. The ministry and agency responsible for ODA differ depending on country, - for instance, the ministry of foreign affairs, the ministry of finance, the ministry of planning, etc.

Request for technical cooperation:

A request from the government wishing to obtain technical cooperation from JICA (the ministry and agency responsible for ODA) to the government of Japan. The ministry of foreign affairs of Japan and JICA receive requests for technical projects expected to be launched for the next fiscal year onwards. The request for technical cooperation from the requesting country's government is submitted to the ministry of foreign affairs in Japan through the Embassy of Japan in the requesting country.

International agreement:

An agreement that is entered under international law by country or international organization as actor, establishing the respective parties' rights and obligations.

Technical cooperation project:

Activities that aims to address issues in developing countries and are conducted by combining three cooperation tools, i.e. "expert dispatch", "acceptance of trainees" and "provision of machinery and equipment", as a project within a certain timeframe to achieve objectives set.

Expert dispatch:

Dispatch of personnel from Japan to the recipient country to guide counterparts (administrators, engineers related to technical cooperation project) in the transfer of technology, policy and project management and so forth. In this program, Japanese researchers who conduct research in the recipient country as JICA experts are referred to as "overseas researchers", and those who are dispatched for a period exceeding one year per dispatch (i.e. From departure date to return date) are referred to as "long-term overseas researchers" and those who are dispatched for a period not exceeding one year as "short-term overseas researchers". Procedures concerning the dispatch of short-term overseas researchers are taken by the principal investigator's institution (Expenses for dispatching short-term overseas researcher are included in the contract amount described in the project contract signed between JICA and the research institute). However, procedures for dispatching long-term overseas researchers are taken directly by JICA (and expenses for their dispatch are not included in the contract amount described in the project contract signed between the parties concerned).

Acceptance of trainees:

A form of capacity development initiative on the transfer of expertise and technology in various fields through acceptance of counterparts from developing countries as trainees in Japan or a third country. In this SATREPS program, researchers invited for joint research from recipient countries are referred to as "foreign researchers", who are accepted as JICA trainees.

Ex-ante evaluation:

Evaluation on the appropriateness of the proposed cooperation, which is conducted to examine priorities and necessities prior to the commencement of cooperation and to specify the content of cooperation and clarify expected outcome. Evaluation indicators set in ex-ante evaluation are used as criteria to measure the progress and effects of the cooperation throughout the life of a project.

Local cost:

Costs to be shouldered by the recipient country in implementing and managing the cooperation project. Specifically, local cost includes, but not limited to, personnel expenses, land acquisition cost, transportation cost concerning machinery and equipment provided, recurrent cost (i.e. the regular cost incurred repeatedly, - for instance, costs of the operation and management of facilities built or machinery and equipment provided in the course of cooperation, or employment costs.)

Capacity development (CD):

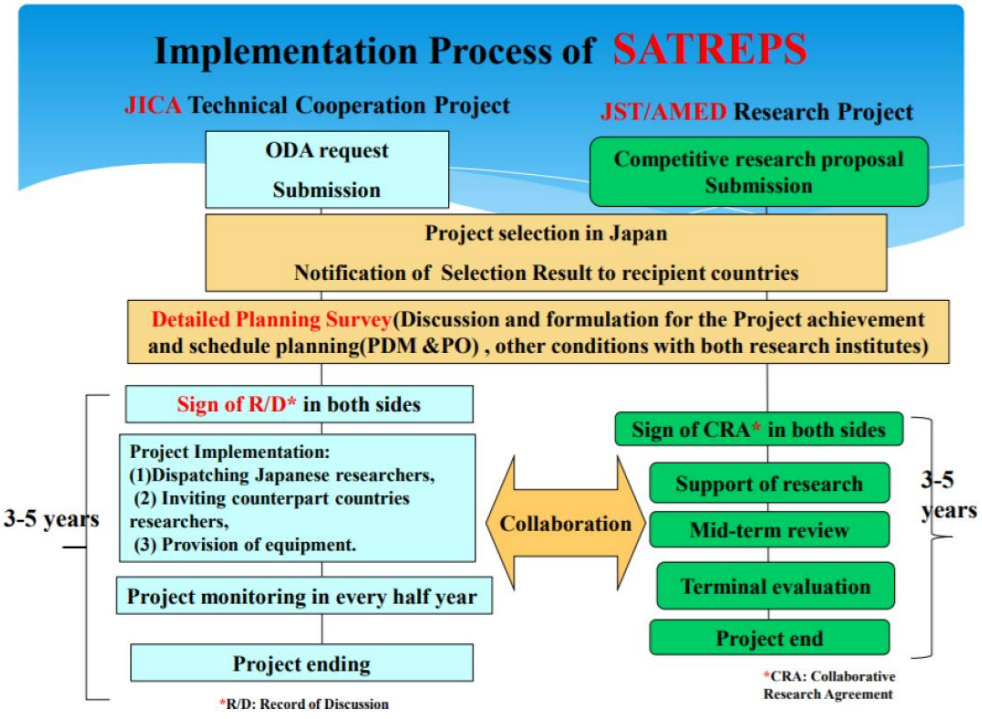
Developing countries' efforts to strengthen their abilities (capacity) to address their respective development issues. JICA serves as a facilitator that supports developing countries' capacity development.

https://libopac.jica.go.jp/

For instance, type in "capacity" in the above-mentioned JICA library search, you will get results containing the word, including the "Capacity Assessment handbook" (only in Japanese) as shown below.

https://libopac.jica.go.jp/images/report/P0000245021.html

<Overall Flow of Technical Cooperation Project>



<Environmental and Social Considerations>

(1) What are environmental and social considerations in JICA cooperation projects?

While the partner country is assumed to bear responsibility for the environmental and social considerations of projects, JICA engages in sustainable development in developing countries while supporting and reviews appropriate environmental and social considerations undertaken by the partner country, in order to avoid or to minimize impacts on the environment and local communities caused by development projects, and to prevent the occurrence of unacceptable adverse impacts.

For this reason, JICA clearly states the requirements regarding environmental and social considerations that must be met by partner countries in the JICA Guidelines for Environmental and Social Considerations, provides support for the implementation of appropriate environmental and social considerations based on these Guidelines, and reviews the efforts made by partner countries as necessary.

"Environmental and social considerations" refers to consideration for impacts on human health and safety, the natural environment, and society, and the specific matters addressed by environmental and social considerations are as follows.

- Human health and safety and the natural environment (including transnational and global-scale impacts) via air, water, soil, wastes, accidents, water use, climate change, biodiversity, ecosystem services, and others. These also include environmental and social impacts on the matters listed below.
- Involuntary resettlement, population migration, the local economy such as employment and livelihoods, land use and local resource utilization, social institutions such as social capital and local decision-making institutions, social organizations, existing social infrastructure and services, vulnerable groups such as people in poverty and indigenous peoples, the distribution of benefits and losses and fairness in the development process, gender, children's rights, cultural heritages, local conflicts of interest, infectious diseases such as HIV/AIDS, and working conditions (including occupational safety).

○JICA Guidelines for Environmental and Social Considerations
https://www.jica.go.jp/english/our_work/social_environmental/guideline/index.html

(2) Categorization of environmental and social impact level

In the SATREPS project selection process, JICA classifies projects into four categories based on the level of their environmental and social impact expected to occur during project implementation, including characteristics such as their general nature, scale, and site location.

- Category A: Projects with a potentially major adverse impact on the environment or society
- Category B: Projects with an adverse impact on the environment or society that is considered less severe than that in Category A
- Category C: Projects considered to have minimal or almost no adverse impact on the environment or society

・ Category FI: Projects are classified as FI if JICA's funding or other assistance is provided to a financial intermediary or executing agency; the financial intermediary or executing agency substantially undertakes the selection and screening of subprojects after funding has been approved by JICA, so that subprojects cannot be specified prior to JICA's approval of funding (or prior to project screening); and these subprojects are expected to have an environmental or social impact. No SATREPS projects are classified as FI.

Sensitive sectors and unique or sensitive areas are listed below.

1. Sensitive Sectors
Large-scale projects in the following sectors:
(1) Mining, including oil and natural gas development
(2) Oil and gas pipelines
(3) Industrial development
(4) Thermal power, including geothermal power
(5) Hydropower, dams, and reservoirs
(6) Power transmission and distribution lines involving large-scale involuntary resettlement, large-scale logging, or submarine electrical cables
(7) River/erosion control
(8) Roads, railways, and bridges
(9) Airports
(10) Ports and harbors
(11) Water supply, sewage, and wastewater treatment that have sensitive characteristics or that are located in sensitive areas or in their vicinity
(12) Waste management and disposal
(13) Agriculture involving large-scale land clearing or irrigation

2. Sensitive Characteristics
(1)Large-scale involuntary resettlement
(2)Large-scale groundwater pumping
(3)Large-scale land reclamation, land development, and land clearing
(4)Large-scale logging

3. Sensitive Areas
Projects in the following areas or their vicinity:
(1)National parks, nationally-designated protected areas (coastal areas, wetlands, areas for ethnic minorities or indigenous peoples and cultural heritage, etc. designated by national governments)
(2)Areas that are thought to require careful considerations for the host countries or the regions

<Natural Environment>

a) Primary forests or natural forests in tropical areas

b) Habitats with important ecological value (coral reefs, mangrove wetlands, tidal flats, etc.)

c) Habitats of rare species that require protection under domestic legislation, international treaties,etc.

d) Areas in danger of large-scale salt accumulation or soil erosion

e) Areas with a remarkable tendency of desertification

<Social Environment>

a) Areas with unique archeological, historical, or cultural values

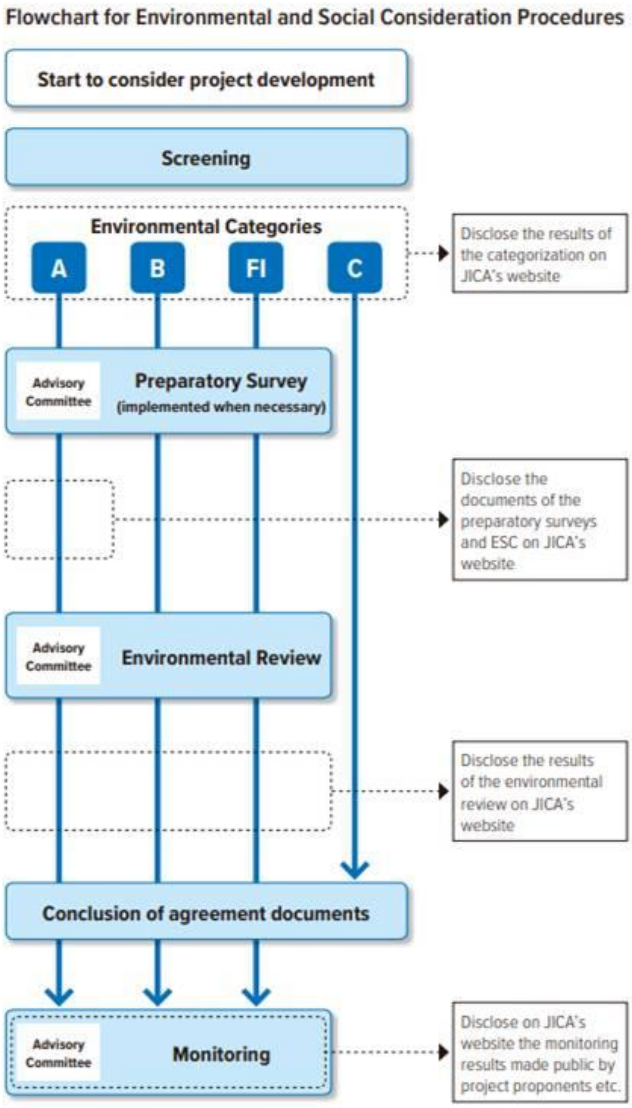
b) Areas inhabited by ethnic minorities, indigenous peoples, or nomadic peoples with traditional ways of life, and other areas with special social values

(3) Environmental and social consideration procedures for SATREPS projects

As part of the Detailed Design Study after provisional selection, SATREPS projects classified as Category A or B must undergo an environmental review[15], as shown in the flowchart below, and the results must be reflected in R/D decision-making. The time required for this environmental review will vary depending on individual circumstances, including the laws concerning environmental and social considerations in the country concerned and the environmental and social impact of the project. In some cases, the environmental review may require so much time that it may not be possible to sign the R/D by the deadline. It may also be necessary to conduct monitoring of environmental and social impact items agreed in the R/D based on the results of an environmental review after a project has started.

Projects classified as Category C do not undergo an environmental review.

[15] The environmental review is conducted on the basis of information supplied by the partner country and related parties, and evaluates necessary measures to avoid, minimize, alleviate, mitigate, or compensate for potential adverse impacts resulting from the project.



(4) Points to consider when putting together a SATREPS project

As shown above, the implementation of SATREPS projects must comply with the legislation and standards on environmental and social considerations stipulated by the government of the partner country (including local governments), and with the JICA Guidelines for Environmental and Social Considerations. They must also adhere to the policies, plans, and other measures on environmental and social considerations stipulated by the government of the partner country.

Please pay attention to minimizing the effect of the conduct of the research project on the environment and the local community, by adhering to the partner country's laws, regulations, and other legislation and by holding discussions with the partner country in advance if at all possible.

For this reason, to ensure that project implementation proceeds smoothly after provisional selection, when putting together a SATREPS project, hold discussions with the partner country research institution and conduct careful checks to ascertain whether it complies with the partner country's legislation and standards on environmental and social considerations and the level of its

environmental and social impact in light of the above points, and pay attention to ensuring that the project has minimal or almost no potential adverse environmental or social impact if possible.

Chapter 5 Key Points for Application

This chapter mainly covers matters under the jurisdiction of JST. For information about how JICA handles issues related to topics dealt with from 5.7 to 5.9, 5.11,5.12 and 5.27 in this chapter, please refer to “Chapter 4 Outline of technical cooperation through ODA” in this Public Invitation Guideline or JICA’s “Science and Technology Research Partnership for Sustainable Development (SATREPS) Project Jisshino Tebiki” (only in Japanese) (https://www.jica.go.jp/activities/schemes/science/form/ku57pq00000nj5mf-att/general_01.pdf).

5.1 Taking and completing research ethics education program

A research proposer must complete the research ethics education program before he/she can apply. If JST cannot confirm his/her completion, he/she is considered to have failed to meet the application requirements.

To take research ethics education programs and to submit a declaration of completion, follow either procedure (1) or (2) below. For how to enter with e-Rad, please refer to Chapter 6 “Submission via the Cross-ministerial R&D Management System (e-Rad)” .

(1) For applicants who have completed an equivalent program at their organization

Applicants who have already completed an e-learning program or research ethics education programs (including eAPRIN (formerly CITI)) by the time of their application are requested to declare the completion on the e-Rad application information entry screen.

(2) For applicants who have not completed an equivalent program at their organization (including for applicants at their organization that do not have such a program)

a. If applicants have completed eAPRIN (formerly CITI) in the past JST program, etc.

Applicants who have completed eAPRIN (formerly CITI) at the time of application for JST programs are requested to declare the completion on the e-Rad application information entry screen.

b. Other than “a” above

Applicants who find it difficult to take a research ethics education program because their organization does not offer such a program or for other reasons may take the condensed version of the eAPRIN (formerly CITI) through JST.

Applicants are requested to take the program from the following URL:
https://eduprv.aprin.or.jp/jstshinsei.html

No cost is incurred for taking the program, which takes about one to two hours to complete. Applicants take and complete the program without delay, declare the completion of the program, and enter the certificate completion number from the completion certificate (the Ref # to the right of the completion date) in the e-Rad application information entry screen.

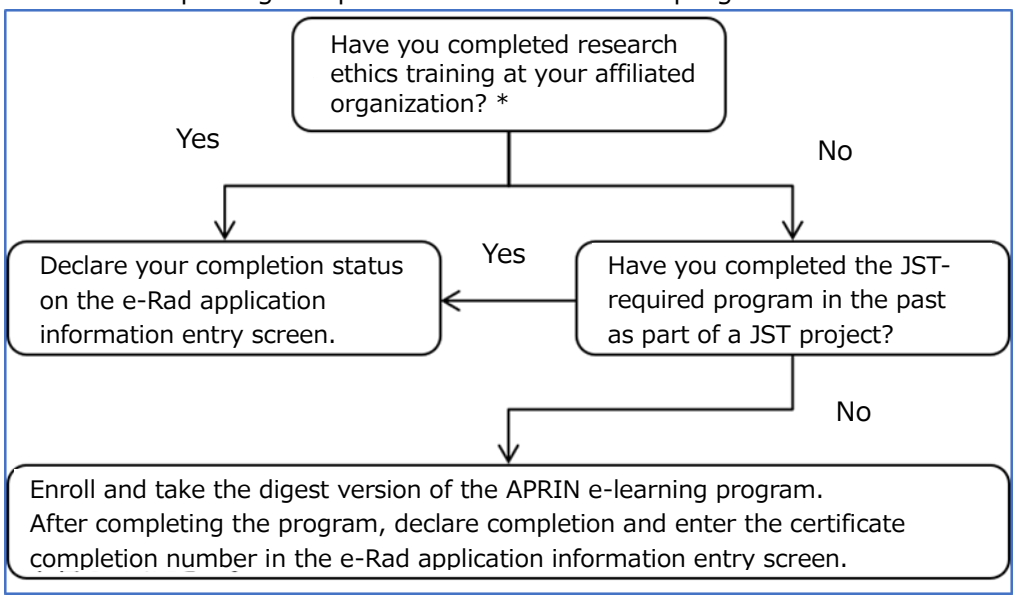
■Contact for consultation over the research ethics education programs

Research Integrity Division, Department of Legal and Compliance Affairs, Japan Science and Technology Agency
E-mail： rcr-kousyu@jst.go.jp

■Contact for consultation over the public invitation for application
SATREPS Group, Department of International Affairs, Japan Science and Technology Agency
E-mail： global@jst.go.jp

* Include the program name, e-Rad project ID, research applicant name and project title in the body of email.

Flow chart for reporting completion of research ethics programs



JST has required researchers participating in this program to take and complete the “eAPRIN (formerly CITI).” Since this requirement will remain unchanged for the next fiscal year, in principle, all research participants will be required to take and complete the eAPRIN (formerly CITI) except those applicants who have already completed it at their organization or in a JST program.

5.2 Measures against unreasonable duplication and excessive concentration

○Measures against unreasonable duplication

In the event that a researcher is unnecessarily in receipt of multiple competitive research funding or other research funding (all research funding allocated to the individual research content, including grants and subsidies, joint research fees, and contract research fees, including those from overseas*) for the same research project (in terms of the project title or content of research receiving competitive research funding), depending on the extent, the project may be rejected, its selection may be revoked, or its funding may be reduced (hereinafter referred to as “revocation of selection, etc. of research project).

・In the case where simultaneous proposals have been submitted for multiple competitive research funding or other research funding and a duplicate approval has been granted for

essentially the same research project (including overlapping cases, the same shall apply hereinafter).

・In the case where a duplicate application is made for funding a research project that is essentially the same as another research project that has already been selected and received competitive research funding or other research funding.

・In the case where there is overlap in the intended use of research funds between multiple research projects

・Other cases equivalent to the above

Even at the application stage of this program, no restriction is imposed on the application for other competitive research funding or other research funding. However, if the research project is selected by another competitive research funding or other research funding, it shall be conveyed promptly to the clerk in charge of this program. If there is any omission in this report, the selection decision for the research project may be rejected.

*Excluding basic expenses or internal funding distributed within the researcher's institution, and fundraising by commercial activities or direct or indirect financing as stipulated in the Commercial Code.

○Measures against excessive concentration

Even if the content of the research proposed for this program differs from the content of research being carried out under another competitive research funding or other research funding, in the case where the overall research funding allocated to the same researcher or research group (hereinafter referred to as "researchers") in the relevant fiscal year exceeds an amount that can be utilized effectively and efficiently and can be used within the research period, and the selection decision may be rejected in this project in cases falling under any of the following.

・In the case where an excessive amount of research funding is being received in light of the capabilities of the researchers and the research methods being used, etc.

・In the case where an excessive amount of research funding is being received in comparison with the amount of effort allocated to the research project (the percentage of working hours required for conducting the relevant research in the total working hours of 100% (*))

・In the case where highly expensive research equipment is purchased unnecessarily

・Other cases equivalent to the above

In the case where you submit proposals to other competitive research funding or other research funding after submitting your application for this program, and the research project is selected by another competitive funding program or if any information provided on your application changes, it shall be conveyed promptly to the clerk in charge of this program. If reporting is omitted, the selection decision for the research project may be rejected.

* The researcher's total working hours do not only refer to the hours for research activities, but also to substantially all working hours including those for educational activities and management tasks.

○Method of eliminating unreasonable duplication and excessive concentration

You are required to provide the following information at the time of application to confirm whether

the appropriate amount of effort can be secured, while eliminating the unreasonable duplication and excessive concentration of competitive funding and assuring the transparency of research activities.

(i) Current status of applications to and receipt of other competitive research funding and other research funding, including from other government ministries, and information on all current affiliate organizations and positions

At the time of application, you are requested to provide information on the current status of applications to and receipt of other competitive research funding and other research funding for the principal investigator and main joint investigators (including name of system, research project title, implementation period, budget, and amount of effort) (hereinafter referred to as "information on research funding") and information on all current affiliate organizations and positions (including concurrent positions, participation in overseas recruitment programs, and honorary professorships without an employment contract) (hereafter "information on affiliate organizations and positions") in the application materials and the cross-ministerial R&D Management System (e-Rad). Should incorrect information be stated in the application materials or e-Rad, the research project may be rejected or otherwise sanctioned.

Among this information on research funding, information on joint research or other research for which a non-disclosure agreement or similar has been signed will be handled in accordance with the individual circumstances to avoid circumscribing activities such as industry-academic collaboration, as described below.

- The submission will be required of only the information necessary to confirm that the research project for which an application has been submitted does not entail the unreasonable duplication and excessive concentration of competitive funding and whether the appropriate amount of effort to conduct the research project can be secured (in principle, only the names of partner institutions involved in joint research or the like, the amount of research funding received, and information on the amount of effort).
- However, should submission be difficult on the basis of the content of a non-disclosure agreement or similar that has already been signed, or for other unavoidable reasons, information may be submitted without including the names of the partner institutions and the amount of research funding received. In such cases, we may make inquiries of your affiliate organization if necessary.
- In addition to affiliate organizations, information may also be shared with funding agencies and related government ministries, but in these cases it will only be shared with individuals with an obligation to maintain confidentiality.

When signing non-disclosure agreements or similar in future, please investigate whether it is possible to include the presumption that the necessary information only can be submitted when applying for competitive research funding. However, please be aware that if both parties to the contract are in agreement on the extent of information that should be kept secret and the legitimate reason for this (for example, if this information is vitally important for corporate strategy and considered particularly highly confidential), it is possible to agree a contract that does not include a presumption of the submission of this confidential information.

(ii) Provision of other information required to assure transparency about all other research activities in which you are involved

In addition to information on research funding, affiliate organizations and positions, you are also required to pledge that you are appropriately reporting the information required to assure transparency regarding all the research activities in which you are involved, including donations, etc., and support for facilities and equipment*, to your affiliate organization on the basis of the relevant regulations and other stipulations. Should it come to light that you are not reporting appropriately, in violation of this pledge, the research project may be rejected or otherwise sanctioned.

With respect to information on the status of acceptance of facilities, equipment, and other such materials that will not be used for the research project for which the application will be submitted but are being used for other work, in addition to this pledge, your affiliate organization may be requested to submit information on its understanding and management of this information, from the viewpoint of confirming that it does not entail the unreasonable duplication and excessive concentration of competitive funding and that the appropriate amount of effort to conduct the research project can be secured.

○Providing information on application content to eliminate unreasonable duplication and excessive concentration

In order to eliminate unreasonable duplication and excessive concentration, JST may partially provide information on the application content to persons in charge of other competitive funding programs, including at other ministries and agencies, to the extent necessary, through e-Rad.

5.3 Assurance of research integrity with respect to new risks associated with the internationalization and opening up of research activities

Open science is a major principle of the promotion of science, technology, and innovation creation in Japan, and it will be necessary to engage in the forceful promotion of international joint research with a diverse range of partners in future. At the same time, in recent years concerns have been raised that the new risks associated with the internationalization and opening up of research activities may damage the values of openness and transparency that are foundational to the research environment, and that researchers may run the risk of unintentionally falling into conflicts of interest and duty. Under these circumstances, building an internationally trustworthy research environment is essential if Japan is to proceed with the necessary international cooperation and exchanges while protecting the values that are foundational to the research environment.

In light of the Policy Directions for Ensuring Research Integrity in Response to New Risks Associated with Increasing Internationalization and Openness of Research Activities (Integrated Innovation Strategy Promotion Council Decision, April 27, 2021), it is important for universities, research institutes, and similar organizations to improve their regulations and management systems related to issues including conflicts of interest and duty, and autonomously ensure the soundness and fairness of research (research integrity) among researchers and universities, research institutes, and similar organizations.

From this standpoint, JICA is continuing to eliminate unreasonable duplication and excessive concentration and to ensure the transparency of research activities and to confirm that the

appropriate amount of effort can be secured, and in addition to this, if necessary we may also make inquiries to your affiliate organization about the status of development of its regulations and its understanding and management of information.

5.4 Measures against an improper use and improper receipt

JST will respond strictly to an improper use and improper receipt of research funds (hereinafter referred to as a "improper use and the like") as follows.

○Measures to be taken when an improper use and the like of research costs is found

(i) Measures to cancel the agreement

For a research project for which an improper use and the like has been found, JST will cancel or change the consigned contract and request for return of all or part of the consignment expenses. In addition, JST may not enter into a contract for the next and subsequent fiscal years.

(ii) Measures to restrict eligibility for application and participation*1

If a researcher who has made an improper use and the like of research funds of a program (including a researcher who has conspired; hereinafter referred to as a "researcher who made an improper use and the like") or is accredited to have been involved in the improper use and the like will be regarded as to have violated the duty of due care required of a prudent manager*2, JST will restrict his/her eligibility for application for or participation in this program or give him/her a strict reprimand as shown in the following table, depending on the degree of injustice.

JST may provide the persons in charge of other competitive funding programs, including other ministries under their jurisdiction, with a summary of the improper use and the like (name of the researcher who has made the improper use and the like , project title, affiliated organization, research project, amount of budget, fiscal year of research, description of misconduct, and description of measures that have been taken).

*1 The "application and participation" refers to proposal of or application for a new project, new participation in research as a joint researcher, or participation in an ongoing research project (continued project) as a principal investigator or joint researcher.

* 2 "A researcher who has violated the duty of due care required of a prudent manager" refers to a researcher who was not recognized as being involved in an improper use and the like but has violated the duty to conduct the project with the attention of a prudent manager.

<table>
<tr><th>Classification of improper use or improper receipt</th><th colspan="2">Degree of improper use</th><th>Application prohibited period *3</th></tr>
<tr><td rowspan="2">Those researchers who engaged in improper use and any researchers colluding in the said</td><td colspan="2">1 Personal use for personal gain</td><td>10 years</td></tr>
<tr><td>2 Other than above</td><td>① Major influences on society, or strongly aggravated</td><td>5 years</td></tr>
</table>

improper use *1		② Improper use other than ① or ③	2–4 years
		③ Minor influence on society, or weakly aggravated	1 year
Those researchers awarded competitive funding through false or other improper means and any researchers colluding in the said improper use			5 years
Those researchers who were not involved in the improper use but were in violation of the requirement to exercise the duty of due care required of a prudent manager *2			A minimum of 1 year to a maximum of 2 years according to the researcher's degree of violation of the duty of due care required of a prudent manager

In the following cases, there will be no restriction on eligibility, but a reprimand will be issued.

* 1: Improper use having a minor impact on society and that is deemed to have been done with little malicious intent, and the amount of improper used funds is small.
* 2: Improper use having a minor impact on society and that is deemed to have been done with little malicious intent.
* 3: In principle, the period for which applications are prohibited starts from the fiscal year following that in which the improper use or similar was identified and the research funding returned. Eligibility for participation is also restricted for the fiscal year in which the improper use or similar was identified.

(iii) About publication of misconduct case

For the researchers, who have made an improper use and the like of research funds and violated the duty of due care required of a prudent manager in this project, are subject to restrictions on eligibility for application for and participation in it. JST will publicly disclose the overview of the misconduct case (researcher name, project title, affiliate organization, fiscal year of research, description of misconduct, and description of measures that have been taken). The overview of the misconduct case (program name, affiliate organization, fiscal year of research, content of misconduct, and description of measures that have been taken) is also released, in principle, by the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

"Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)" states that if the misconduct is found and determined as a result

of the survey, the research institution is required to announce the survey results promptly. Each organization should act properly in accordance with the guidelines.

* For the outline of the misconduct cases currently published on the website of MEXT, please refer to the following URL.
https://www.mext.go.jp/a_menu/kansa/houkoku/1364929.htm

5.5 Measures taken against researchers whose eligibility for applications and participation have been restricted under other competitive funding programs

For researchers who have been restricted due to the improper use and the like of research funds in other competitive funding programs* of other ministries are also restricted on eligibility for application for and participation in this program during that restriction period.

The other competitive funding programs also include ones for which public invitation will start from the FY2023. The other competitive funding programs also include ones for which public invitation ended before the fiscal year FY2022.

* For specific target competitive funding programs, please visit the following website:
https://www8.cao.go.jp/cstp/compefund/

5.6 Measures taken against violation of related laws and regulations

If research is conducted in violation of the relevant laws and regulations or guidelines, the researcher will be subject to disposal and penalties pursuant to the laws and regulations, the termination of research fund allocation, or revoking of the decision on research fund allocation.

5.7 About carryover

If a research institution has difficulty completing the disbursement of its funding within the fiscal year for unavoidable reasons associated with the progress of the project, such as difficulties in preliminary investigations for experimental research or the determination of study methods, conditions related to planning or design, weather conditions, or difficulty in obtaining materials, it may be permissible for the funding to be carried over to the end of the next fiscal year, provided that the contract covers more than one year and continues into the next fiscal year.

5.8 About cross-ministerial cost categorization table

In this program, the cost structure is determined based on the cross-ministerial cost categorization table that is to be commonly used for competitive funds. For the handling of costs, please refer to the following cross-ministerial cost categorization table.
https://www.jst.go.jp/contract/download/2021/2021globals309betsu.pdf (only in Japanese)

In response to the Science, Technology, and Innovation Basic Plan, the Integrated Innovation Strategy 2021, and the Comprehensive Package for Supporting Research Capabilities and Young Researchers, JICA is currently improving its system for competitive research funding. Following this, this program makes it possible to expend the costs for outsourcing non-research work(buyout expenses). Please make sure to check the separated administration manual below; the requirements and necessary procedures set forth in the administration manual.

○ Review of the possibility of disbursing costs to cover tasks other than research from direct costs (introduction of buyout system) and disbursement of personnel costs for principal investigators (PIs) from direct costs (communication) (September 17, 2020)
https://www.jst.go.jp/osirase/2020/pdf/20200917.pdf(Only in Japanese)
https://www.jst.go.jp/global/pdf/pi_houshin_kokusai.pdf (Only in Japanese)

5.9 Diversion of cost among items

For diversion of cost among the items, the amount of diversion permitted without JST approval is capped at 50% of the total direct costs.

5.10 Securing research period up to the end of fiscal year

JST takes the following measures for all the competitive funds so that researchers can conduct their research until the end of the fiscal year.

(1) Research institutions and researchers shall submit a project completion notice as an outcome promptly after the completion of the project. JST will confirm it and perform acceptance inspection of the research results.
(2) The deadline for submitting the accounting performance report shall be May 31.
(3) The deadline for submission of the research results report shall be May 31.

Each research institution should strive to establish a necessary system based on the understanding that these measures are taken to secure the research period which ends at the end of the fiscal year.

5.11 Storage of receipts pertaining to indirect costs and report on actual use

Research institutions that receive allocated indirect costs are requested to manage them properly and store documents, such as receipts, that prove their appropriate use for five years from the fiscal year following the fiscal year of project completion.

Research institutions that have received allocated indirect costs should report their actual use for each fiscal year by June 30 of the following fiscal year to JST through cross-ministerial R&D Management System (e-Rad) (Research institutions that have acquired multiple competitive funds are requested to report all the indirect costs relevant to them). If you do not know how to operate e-Rad for reporting, refer to e-Rad Operation Manual (https://www.e-rad.go.jp/manual/for_organ.html) or “Frequently Asked Questions.” (https://qa.e-rad.go.jp/).

5.12 Promoting the joint use of research facilities and equipment

“About reforming competitive research expenses toward sustainable creation of research achievements (mid-term summary)” (Committee for reforming competitive research expenses, June 24, 2015) considers it proper to share relatively large facilities and equipment for universal use while aiming to fully achieve the research objectives.

In addition, measures including promoting the deployment and sharing of research equipment and facilities, establishing mechanisms for the installation, updating, and utilization of systematic

research facilities (switching to core facilities), and the formulation and publication of shared use policies are also called for in the Comprehensive Package for Supporting Research Capabilities and Young Researchers (Council for Science, Technology and Innovation, January 23, 2020) and the Sixth Basic Plan for Science, Technology, and Innovation (approved by the Cabinet on March 26, 2021).

Based on these, research institutions are requested to promote joint use of research facilities and equipment purchased by this project, in particular, large and versatile ones, so as not preclude the performance of research projects. Such purchase shall be made within control conditions of other research costs and in accordance with the joint use system in the affiliated organization. The use of facilities and equipment purchased with other research funds and purchase or use with combined multiple research funds shall also be actively promoted. Note that the management of shared facilities and equipment should be balanced with their use to achieve the purposes of the research projects.

Besides, the research institutions are requested to collaborate actively with the “University Collaborative Research Facility Network Project” and with a university-wide joint use system to promote the joint use of research facilities and equipment beyond the framework of research organizations or institutions (The “University Collaborative Research Facility Network Project” is operated by the National Institutes of Natural Sciences, and Inter-University Research Institute Corporation to promote joint use of nation-wide facilities. The university-wide joint use system has been established at each national university as part of the programs such as “Program for supporting introduction of the new sharing system” or “Core Facility Construction Support Program”).

○ “About reforming competitive research expenses toward sustainable creation of research achievements”
(Committee for reforming competitive research expenses, June 24, 2015)
https://www.mext.go.jp/b_menu/shingi/chousa/shinkou/039/gaiyou/1359306.htm

○”the Science, Technology, and Innovation Basic Plan”
(approved by the Cabinet on March 26, 2021)
https://www8.cao.go.jp/cstp/kihonkeikaku/6honbun.pdf

○ “Unified Rules for Administrative Procedures, Etc. in Competitive Research Funding”
(Agreed by the Inter-Ministerial Committee on Competitive Research Funding on March 5, 2021)
https://www8.cao.go.jp/cstp/compefund/toitsu_rule_r30305.pdf

○”On the Purchase of Shared Equipment by Multiple Research Funding Systems (combined use)”
(Agreed upon by funding agencies and related ministries, March 2, 2020)
https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf

○ “University Collaborative Research Facility Network Project”
https://chem-eqnet.ims.ac.jp/

○“New Shared System Installation Support Program ” and “Core Facility Construction Support Program”

https://www.jst.go.jp/shincho/program/pdf/sinkyoyo_brochure2020.pdf

5.13 Improving the treatment of doctoral students

In order to attract outstanding students and working people from within Japan and overseas by improving the level of financial support for postgraduate students, particularly doctoral students, the Science, Technology, and Innovation Basic Plan (approved by the Cabinet on March 26, 2021) has set the numerical target of tripling the number of doctoral students who receive about the amount equivalent to living expenses, stating that "In order to promote the payment of salaries to doctoral students at an appropriate level as a research assistant (RA) from competitive research funds and joint research funds, the government will formulate rules for the payment of RA expenses relating to employment and remuneration for RAs at each business and university, and implement them sequentially from FY2021." Universities and R&D corporations are therefore required to expand the recruitment of doctoral students and improve their treatment.

In addition, the Guidelines for Employment and Training of Post-Docs, Etc. (December 3, 2020, Science and Technology Council Human Resource Committee) also state that "because doctoral students are simultaneously both students and researchers, creating an environment in which they can conduct research activities and securing their treatment is an important obligation for universities that are training researchers." They also note that "It is particularly important that their treatment should appropriately evaluate their contribution, by means such as setting an hourly rate in accordance with the quality and nature of their work assignments and paying a salary according to the time spent engaged in these assignments under appropriate working management," and that "In universities and similar institutions, when applying for competitive research funding, etc., if RAs are to be employed then the required costs must be included as direct costs in the budget, or university regulations must be reviewed to enable RAs to be paid an hourly rate at the appropriate level."

Based on these considerations, in this program, JST asks that research institutions actively employ (latter stage) doctoral students who are necessary for the execution of the research as RAs and TAs, that research institutions set a rate commensurate with the nature and content of their work, aiming for a salary level equivalent to the cost of living, and pay them a salary based on the time they engage in their work under appropriate work management. In addition, when applying for this program, please make sure that your application is based on a budget plan that also takes into account the amount of salary for (latter-stage) doctoral student mentioned above.

- In the Science, Technology and Innovation Basic Plan, the amount equivalent to living expenses received by doctoral students is considered to be 1.8 million yen or more. The number of beneficiaries receiving around 2.4 million yen/year, equivalent to the level received by special researchers (DCs) who are recipients of research scholarships to enable outstanding doctoral students to concentrate on their research without experiencing financial anxiety, will also be greatly increased.
- Regarding the treatment of doctoral students hired to carry out research projects, the Guidelines for Employment and Training of Post-Docs, Etc. (December 3, 2020, Science and Technology Council Human Resource Committee) state that "Considering the average salary of specially appointed assistant professors employed under competitive research funding, etc., the standard hourly rate paid to doctoral students should be in the region of 2,000–2,500 yen."

- The specific amount and period of payment will be determined by the research institute. Payment is not restricted to an amount above or below the levels given above.
- When hiring students as RAs, please make sure that they do not work excessive amounts, and consider the balance with the (latter-stage) doctoral students' own research and study time.

5.14 Securing an independent and stable research environment for young researchers

In the "2019 Reform for Boosting Research Capability" (Ministry of Education, Culture, Sports, Science and Technology (MEXT), April 23, 2019) and the "Development of Science and Technology Innovation Policy for Knowledge-Intensive Value Creation: Becoming a World-Leading Country through the achievement of Society 5.0 — Final Summary" (Special Committee on General Policy of the Council for Science and Technology, March 26, 2020), the importance of ensuring employment periods of five years or more has been pointed out with regard to fixed-term positions such as non-tenured faculty members and postdoctoral fellows, as short-term appointments can be a hindrance to career development.

With respect to National University Corporations and Inter-University Research Institute Corporations, "Guidelines for Personnel Salary Management Reform for National University Corporations, etc.: Toward the Establishment of Attractive Personnel Salary Management that Contributes to the Improvement of Educational and Research Capabilities" (Ministry of Education, Culture, Sports, Science and Technology (MEXT), February 25, 2019) states that "in order to achieve the two goals of fostering young faculty members and stabilizing employment, it is preferable that a system is implemented which incorporates the perspective of developing researchers while maintaining flexibility, such as securing employment terms of a certain length — 5 to 10 years — by using expenses with a high degree of freedom of use, such as indirect expenses and endowments, even if the researchers have a fixed term of employment.

Based on these considerations, when hiring young researchers such as non-tenured faculty members and postdoctoral fellows for this program, JST asks that you check with the human resources and accounting department, and that research institutions try to ensure that the length of the researchers' employment term is the same as that of the research period. Where possible, please also try to secure an employment term of a certain length (about five years or more) by utilizing other external funds' indirect expenses, basic expenses, and endowment.

5.15 Self-directed research by young researchers hired for project implementation

Based on "Implementation policy related to self-directed research by young researchers hired for project implementation for competitive research expenses" (liaison conference among relevant ministries and agencies on competitive research expenses, Revised December 18, 2020), personnel expenses may be paid out from this program for young researchers hired in this program for part of the efforts in this program applied to self-directed research and activities contributing to improvement of research and management capabilities, provided the principal investigator determines that it will contribute to the project without becoming a hinderance and approval is

received from the principal investigator's affiliated research institution. For details, please refer to the following.

○ Voluntary Research Activities by Young Researchers Employed to Implement a Project (Communication) (April 10, 2020)
https://www.jst.go.jp/osirase/2020/pdf/20200414.pdf (Japanese)

5.16 Supporting various career paths for young researchers

In "Basic Policy for Supporting Various Diverse Career Paths of Young Post-doctoral Researchers Employed with Public Research Funds of the Ministry of Education, Culture, Sports, Science and Technology" (Human Resources Committee, Council for Science, Technology, December 20, 2011), it is requested that public research institutions employing young post-doctoral researchers with public research funds and principal investigators should actively work for young researchers, such as specially-appointed staff or post-doctoral researchers, to secure various career paths in Japan and abroad. The Science, Technology, and Innovation Basic Plan (approved by the Cabinet on March 26, 2021) also sets a target for "the expansion of career paths/mobility to the industrial sector." The Guidelines for Employment and Training of Post-Docs, Etc. (December 3, 2020, Science and Technology Council Human Resource Committee) further state that "It is essential for individuals with doctorates, who have acquired a high level of specialization and outstanding research capabilities, to be successful and create innovation in diverse areas of society, including venture companies and global corporations, and initiatives to encourage the diversification of career paths in the post-doc period are important." Based on the understanding of these circumstances, if research institutions employing young researchers with public research funds (competitive funds, other project research funds, or public research funds for universities) after selecting their research projects in the public invitation, they are requested to provide various supports to secure various career paths for the researchers.

The research institutions should consider utilizing the indirect costs for the efforts.

5.17 Securing URAs and other management professionals

The Sixth Basic Plan for Science, Technology, and Innovation (approved by the Cabinet on March 26, 2021) identifies the importance of guaranteeing the quality of university research administration as a specialist profession and improving the working conditions of university research administrators (URAs) so that this and other management positions become seen as appealing roles. The Comprehensive Package for Supporting Research Capabilities and Young Researchers (Council for Science, Technology and Innovation, January 23, 2020) also indicates the need to establish career paths for management professionals, URAs, engineers, and others.

In light of these policies, if URAs and other management professionals currently employed by research institutions or who will be newly hired are to work in the management of the research program for this project, please endeavor to secure their employment by the research institution for a fixed term (around 5 years or more) if at all possible, not just in this project but by making use of funding sources such as indirect expenses from other external funding, basic expenses, and donations.

At the same time, you are also requested to make active efforts to send these management personnel for URA training or similar as support for securing their career paths. Please also consider utilizing indirect expenses for these efforts.

5.18 Security export control (to prevent technology leakage to foreign countries)

A lot of cutting-edge technologies are being researched at research institutions, and in particular at universities, leading-edge technologies, as well as materials and equipment used for research, are leaked due to an increase of foreign students and researchers through internationalization, which has increased the risk of these technologies being exploited for the development and manufacture of weapons of mass destruction, etc. In order for research institutions to carry out various research activities, including contract Research, they are required to take systematic responses to ensure that research results that may be diverted militarily are not passed on to those who may perform these activities, such as developing of weapons of mass destruction for terrorist groups.

In Japan, exports are restricted *1 for the purpose of maintaining international peace and security, pursuant to the Foreign Exchange and Foreign Trade Act (Act No. 228 of 1949) (hereinafter referred to as the “Foreign Exchange Law”). This, in principle, requires those who intend to export (provide) freight or technologies regulated by the Foreign Exchange Law to obtain approval from the Minister of Economy, Trade and Industry. Research institutions are required to comply with the foreign exchange law, as well as the country’s laws and regulations, guidelines and notifications. If they conduct research in violation of relevant laws and regulations or guidelines, they are subject to termination of research funding allocation or revoking of the decision on research fund allocation, besides legal dispositions and penalties.

*1 At present, Japan’s security export control system consists of two main systems: (1) a system requiring those who intend to export or provide goods (or technologies) that meet specifications or functions of a certain level or higher among those items listed in the Export Trade Control Order Appended Table 1 or the Foreign Exchange Control Order Appended Table (List Regulation) to obtain permission from the Minister of Economy, Trade and Industry; and (2) a system that requires those who intend to export or provide goods (or technologies) not subject to the List Regulation system that may be at risk of diversion to military use (if they meet application, customer, or notification requirements) to obtain permission from the Minister of Economy, Trade and Industry (Catch-all Regulation).

Not only the export of goods but also the provision of technology is subject to regulation under the Foreign Exchange Law. Permission is required for the provision of technologies listed as subject to regulation to people in foreign countries (non-residents [from May 1, 2022, this includes residents classed as Specific Categories (*2)]), etc.

Providing technical information includes providing technical information, such as design drawings, specifications, manuals, samples and prototypes in storage media, such as paper, e-mail, CD, DVD, or USB memory and providing work knowledge through technical guidance, training or technical assistance in seminars. Acceptance of foreign students from foreign countries, and activities, such as joint research, may also involve many exchanges of technologies that may be subject to foreign exchange law.

Please be aware that even attempts to provide (export) technology, etc. acquired through this program may be subject to regulation. Should a regulatory infringement related to the Foreign Exchange and Foreign Trade Act with respect to technology, etc. acquired through this program come to light, all or part of the contract may be revoked.

*2 This refers to categories of residents who are strongly influenced by non-residents, who are identified as Specific Categories in the provisions of Article 1(3)(サ)1–3 of the Notification for Transactions or Acts of Transferring Technology Requiring Permission Pursuant to Article 25 (1) of the Foreign Exchange and Foreign Trade Act and Article 17 (2) of the Foreign Exchange Order.

Under the application requirements for the SATREPS program, the research institution that agrees the contract with the JST under this program is required to possess a framework capable of complying with the Compliance Standards for Exporters and Persons Undertaking Similar Transactions prescribed in Article 55-10 (1) of the Foreign Exchange and Foreign Trade Act research institutions that do not possess a framework capable of compliance at the time of application must create a framework capable of complying with the Compliance Standards for Exporters and Persons Undertaking Similar Transactions by either the date of export (provision) or the date on which the research project concludes, whichever is earlier]. Research institutions that do possess a framework capable of complying with the Compliance Standards for Exporters and Persons Undertaking Similar Transactions may be required to complete the required information (or submit the required documentation) such as how it handles security trade controls, as part of the selection process. Research institutions that do not possess such a framework at the time of application may be required to submit a written pledge to create such a system by either the date of export (provision) or the date on which the research project concludes, whichever is earlier, as part of the selection process. Please be aware that these materials may be reported to the Ministry of Economy, Trade and Industry at the Ministry’s request.

【Reference】Article 55-10 (1) of the Foreign Exchange and Foreign Trade Act
Compliance Standards for Exporters and Persons Undertaking Similar Transactions

Regulations with which persons engaged in export or technology provision as a business (exporters, etc.) are obliged to comply. Exporters, etc. who do not deal in goods that are designated as important and sensitive for security reasons (goods on the Control List) are obliged (1) to designate a responsible person for checking goods and other items, and (2) to implement guidance on legal compliance. Exporters, etc. who deal in goods that are on the Control List are further obliged (1) to designate a director as the responsible person, (2) to set up an export control system, (3) to set up administrative procedures to check applicability, (4) to set up confirmation procedures for the end use and end user, and verify these in accordance with these procedures, and (5) to confirm at the time of shipping that the goods or other items are those that have been checked for applicability.

For details of security trade controls, please see the websites of the Ministry of Economy, Trade and Industry and related government agencies.

○Ministry of Economy, Trade and Industry (METI):Security Export Control (general)

https://www.meti.go.jp/policy/anpo/ *Contact details are also given.

○ Ministry of Economy, Trade and Industry: Deemed Export Control
(website concerning Note *2 above
https://www.meti.go.jp/policy/anpo/anpo07.html

○Guidance for the Control of Sensitive Technologies for Security Export for Academic and Research Institutions
https://www.meti.go.jp/policy/anpo/law_document/tutatu/t07sonota/t07sonota_jishukanri03.pdf

○ Ministry of Economy, Trade and Industry: Model Security Trade Control Regulations Manual for Universities and Research Institutions
https://www.meti.go.jp/policy/anpo/daigaku/manual.pdf

○Center for Information on Security Trade Control
https://www.cistec.or.jp/export/jisyukanri/modelcp/modelcp.html

○ Ministry of Economy, Trade and Industry: Security Trade Guidance (Introduction)
https://www.meti.go.jp/policy/anpo/guidance.html

5.19 Strict implementation of United Nations Security Council Resolution 2321

Strict implementation of United Nations Security Council Resolution 2321

In response to the nuclear test conducted by the Democratic People's Republic of Korea (DPRK) in September 2016 and its repeated ballistic missile launches, the United Nations Security Council adopted United Nations Security Council Resolution on November 30, 2016 (ET, New York) which imposed additional and stronger sanctions on the DPRK. In this regard, MEXT issued a letter of request to relevant organizations entitled "Strict implementation of United Nations Security Council Resolution 2321 (Request) dated February 17, 2017.

The "scientific and technical cooperation" described in Paragraph 11 of the main text of the Resolution includes not only technologies regulated by the Foreign Exchange and Foreign Trade Act, but all cooperative activities other than medical exchanges. It is therefore critical that research institutions ensure the strict implementation of this resolution when engaged in research activities, including this sponsored research.

The text of UNSC Resolution 2321 can be found at:

○ MOFA: United Nations Security Council Resolution 2321, Japanese translation (MOFA Notice No. 463 (issued on December 9, 2016)
https://www.mofa.go.jp/mofaj/files/000211409.pdf

5.20 Related Laws and Other Considerations for Implementing Research

5.20.1 Acquisition and use of genetic resources

When obtaining or using genetic resources (including related traditional knowledge) from another country, including the partner country, in the process of promoting research through a project, please comply with the Convention on Biological Diversity, the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR), and related legislation and other regulations of the country providing the genetic resources be observed, and

also deal appropriately with the Japanese domestic measure that came into force on August 20, 2017 (the ABS* Guideline). Depending on the status of ratification of related treaties and other agreements by the partner country and the state of its domestic legislation, please endeavor to conclude any contracts and obtain any permissions required, as well as concluding a Material Transfer Agreement (MTA) for the transfer of genetic resources between Japan and the partner country. For details on access to genetic resources, profit allocation, ABS[16] Guidelines, the Convention on Biological Diversity and ITPGR, refer to the following websites.

Ministry of Environment: http://abs.env.go.jp/consideration.html

ABS Task Force Team for Academia: http://nig-chizai.sakura.ne.jp/abs_tft/

Japan Bioindustry Association: https://www.mabs.jp/index.html
Convention on Biological Diversity: https://www.cbd.int/
ITPGR: https://www.fao.org/plant-treaty/en/

* This restriction is not limited to items related to the research. Care must be taken with all genetic resources (materials) including commercial goods.

5.20.2 Overseas safety measures and responsibility for the safety of researchers

(1) Safety measures based on the security situation in countries and regions

For information in Japanese on the security situation of countries and regions around the world, see the “Overseas Travel Safety Information” (Kiken Joho) on the overseas safety information (Kaigai Anzen Joho) webpage on the Overseas Safety website run by the Ministry of Foreign Affairs (MOFA) (https://www.anzen.mofa.go.jp/). Overseas Travel Safety Information is information issued for countries and regions that are thought to require particular attention for those considering traveling or residing there, indicating safety measure guidelines for the country or region in question based on a determination of the security situation as well as overall factors such as the political and social situation in that location from a mid-term and long-term perspective. Overseas Travel Safety Information indicates safety measure guidelines at the top of the section for each individual country or region based on four categories (see the following table).

Four levels (categories) of safety measures

“Level 1:Exercise caution”	Japanese nationals traveling to and residing in the country or area are advised to stay alert to the security situation.
“Level 2:Avoid Non-essential travel”	Japanese nationals are advised to avoid non-essential travel, and to stay alert to the security situation and to take appropriate safety measures should they decide to

[16] ABS: Access and Benefit-Sharingnd Benefit-Sharing

	travel.
“Level 3:Avoid all travel”	All Japanese nationals are urged to avoid all travel regardless of purposes. Japanese residents might be advised to consider the possibility of evacuation or to prepare for evacuation.
“Level 4:Evacuate and Avoid all travel”	All Japanese nationals are urged to evacuate immediately from the country or the area and urged to avoid all travel regardless of purposes.

ODA projects required that JICA and MOFA be consulted when traveling to a region categorized as Level 3 or higher. Each project will be judged on a case-by-case basis, but, as a rule, research will only be conducted in Level 3 regions if the level of urgency and importance of the project is high and appropriate safety measures can be taken, and no research will be conducted in Level 4 regions. Appendix 1 is a list of eligible countries based on the situation as of August 2022. When applying, please check the aforementioned MOFA Overseas Safety website for the latest information.

In addition to Overseas Travel Safety Information, MOFA also provides Travel Advice and Warning on Infectious Diseases (Kansensho Kiken Joho). Travel Advice and Warning on Infectious Diseases is overseas safety information about COVID-19 and other highly dangerous diseases issued for countries and regions that are thought to require particular attention for those considering traveling or residing there. For more information, see “MOFA's Travel Advice and Warning on Infectious Diseases” (https://www.anzen.mofa.go.jp/masters/kansen_risk.html) on MOFA’s Overseas Safety website. The situation regarding restrictions on travel and entry to countries and regions from Japan is fluid. Please check “Shingata Korona Uirusu ni kakawaru nihon kara no tokosha / nihonjin ni taisuru kaku koku / chiiki no nyukoku seigen sochi oyobi nyukokugo no kodo seigen” (COVID-19-related restrictions on entry to countries and regions and restrictions on movement after entry for travelers from Japan and Japanese citizens) (https://www.anzen.mofa.go.jp/covid19/pdfhistory_world.html) on MOFA’s Overseas Safety website and similar sources for information on the latest situation.

(2) Responsibility for the safety of researchers

JST and JICA will not assume any responsibility for injuries, illnesses, or other accidents that occur during the period of joint research for this project. When traveling overseas, a researcher must be enrolled in an overseas travel accident insurance that includes adequate coverage for medical and rescuer’s expenses.

Regarding management of safety and health, the research institution must establish a management system and internal regulations, comply with the Industrial Safety and Health Act and other laws and regulations, and endeavor to prevent accidents. In the event of an accident or injury to a researcher, etc. in association with an accident occurring due to the contract research, this must be reported promptly to JST and JICA in writing.

In addition, in light of the recent international situation, please make maximum efforts to protect

the safety of researchers and other project staff based on information and guidance provided by MOFA and JICA, includkling ensuring that they have registered their overseas residence (Overseas Residential Registration) or registered on “Tabi-Regi” (Overseas Travel Registration).

On the following website, JICA provides measures for ensuring safety in different countries, Safety Manuals for different countries, warning information, and scheduled safety training sessions. Researchers going overseas are requested to obtain this safety information in advance and to attend safety training. When in another country, please observe the safety measures put in place by the JICA Office and provide emergency contact details and travel information.

○JICA Safety Information by Country https://www.jica.go.jp/about/safety/rule.html

○JICA Safety Training https://www.jica.go.jp/about/safety/training.html

5.20.3 Bioethics and Safety Assurance

When conducting life science research, laws, ordinances, and guidelines issued by each Ministry to ensure bioethics and safety must be observed. If approvals, reports, or confirmations etc. by the director of the institution to which researchers are affiliated are required in association with the research, the specified procedures must be followed.

The main laws and regulations issued by various Ministries can be found at the following links.

“Measures on Bioethics and Safety Assurance”
https://www.lifescience.mext.go.jp/bioethics/index.html (Japanese)
Ministry of Health, Labour and Welfare’s research guidelines
https://www.mhlw.go.jp/general/seido/kousei/i-kenkyu/

5.20.4 Protection of interests and human rights

If a research plan requires agreements or cooperation from parties involved or social consensus, a researcher must make appropriate preparations regarding the protection of interests and human rights before application.

5.20.5 Social and Ethical Considerations

A research plan or its implementation deemed unacceptable from a social and ethical standpoint will not be considered during the selection process. Also, any violation of the above mentioned guidelines or any inappropriate conduct after the commencement of research may result in the cancellation of the selection or the termination of the research project, full or partial return of research expenses, and a public announcement of the misconduct.

5.20.6 Ban on the military application of research results

The military application of research results from this joint research program is strictly prohibited.

5.21 Promoting dialogue and collaboration with the public

In Promoting “Dialogue on Science and Technology with the Public (Basic Approach Policy),” adopted on June 19, 2010 by the Minister of State for Science and Technology Policy in charge and

by the decision of the expert diet members, it is considered essential to fulfill the following objectives: 1) Achieve continued excellent results in the field of science and technology, 2) Return the achievements in science and technology to the public for further development of the field in Japan, and 3) Promote science and technology jointly with the public, while obtaining their understanding and support. For a selected research project to receive a minimum of JPY 30 million per year of public research fund (competitive or project research fund), researchers are required to actively undertake the continuous releases of research achievements through lectures, symposiums, and the internet, and full activities involving diverse stakeholders in the roundtable meetings including the Dialogue on Science and Technology with the Public.

○ Promoting Dialogue on Science and Technology with the Public (Basic Approach Policy)
https://www8.cao.go.jp/cstp/stsonota/taiwa/taiwa_honbun.pdf (Only in Japanese)

5.22 Open access and research data management

In April 2017, JST announced its basic policy on the handling of research results to promote open science. This policy defines the basic concepts of open access with respect to giving open access to papers publishing research results obtained through this program and the storage, management, and sharing of research data.

In principle, researchers participating in this program are requested to make their research results openly accessible via institutional repositories, open-access journals, or other means. In light of their research institution's data policy and related matters, they are also requested to prepare a data management plan describing their policy and plans for the storage, management, sharing/nondisclosure, etc. of research data generated as a result of their research, to submit this to JST together with their study protocol, and to carry out research having implemented data storage, management, and sharing in accordance with this plan. The plan may be amended during the course of the research project.

For details, please refer to the following.

○ JST Policy on Open Access to Research Publications and Research Data Management
https://www.jst.go.jp/all/about/houshin.html#houshin04

○ JST's Basic Policy Management Guidelines for Handling Research Outcomes for the Promotion of Open Science
https://www.jst.go.jp/pr/intro/openscience/guideline_openscience.pdf

In order to understand the content of information, support researchers, and reflect this in basic policy (revisions), JST analyzes statistical data such as the number of data modules, the type of data, the type of disclosure, and storage location. It is envisaged that the statistical data analyzed will be made public, but individual personal data and names will never be disclosed.

*For life science data, please refer to Section 5.23 (Data Disclosure from the National Bioscience Database Center).

5.23 Data disclosure from National Bioscience Database Center

The National Bioscience Database Center (NBDC) (https://biosciencedbc.jp/) which established in JST in April 2011 promotes integrated use of life sciences databases created by various research institutions. “Provision Translation: Progress and future direction of the Life Sciences Database Integration Project” (January 17, 2013) states that NBDC will play a central role in database-integration and expand coverage of projects receiving data and databases.

Based on these circumstances, researchers are requested to publish the following types of data or databases produced in this program.

No.	Data type	Hosted by	URL
1	Overview of published database	Integbio Database Catalog	https://integbio.jp/dbcatalog/
2	Copies of data associated with a research article etc. or a copy of a public database	Life Science Database Archive	https://dbarchive.biosciencedbc.jp/
3	Data related to human of above 2	NBDC Human Database	https://humandbs.biosciencedbc.jp/

<Contact information>

National Bioscience Database Center, Japan Science and Technology Agency

Phone: 03-5214-8491

e-mail: nbdc-kikaku@jst.go.jp

5.24 Statement of system numbers in paper acknowledgments, etc.

If you present research outcomes obtained through this program, please indicate that you have received a fund from the program.

When showing that you have received a fund from this program in the acknowledgments section of the paper, please include “JST SATREPS Program Grant Number 10 digit system number”. The same applies when submitting a paper. This 10 digit system number is made up of JPMJSA + 4 numbers. You will be informed of the digit system number when the project is accepted.

Examples of paper acknowledgments are given below.

[English]

This work was supported by JST SATREPS Grant Number JPMJSAxxxx.

*If there are two or more programs relating to the paper, please list their names and system numbers in order.

5.25 Research Support Services Partnership Accreditation System

The “Development of Science, and Technology and Innovation Policy for Knowledge-Intensive Value Creation: Becoming a World-Leading Country through the achievement of in Society 5.0 — Final Summary” (Special Committee on General Policy of the Council for Science and Technology, March 26, 2020), highlighted the importance of establishing a new public-private partnership. This

is due to the emergence of start-ups that are committed to continuing research projects previously implemented and supported by the government and returning research outcomes to society as profitable businesses.

The Ministry of Education, Culture, Sports, Science and Technology established the "Research Support Service Partnership Accreditation System" in 2019. The objectives of this system are to improve the research environment for researchers, to accelerate the promotion of science and technology and the creation of innovation in Japan, and to support the development of a variety of research support service initiatives by having the Minister of Education, Culture, Science, Sports and Technology accredit research services provided by private contractors that meet certain conditions as “Research Support Service Partnerships.” Nine such services were accredited by FY2020.

Details of each service can be found on the following webpage of the Ministry of Education, Culture, Sports, Science and Technology. Please make full use of these services.

https://www.mext.go.jp/a_menu/kagaku/kihon/1422215_00001.htm

○ Development of Science, Technology and Innovation Policy for Knowledge-Intensive Value Creation: Becoming a World-Leading Country by Achieving Society 5.0 (Final Summary)
(Special Committee on General Policy of the Council for Science and Technology, March 26, 2020)
https://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu22/houkoku/1422095_00001.htm

5.26 Reform of Competitive Funds

Currently, in response to ” The Science, Technology, and Innovation Basic Plan”, “Integrated Innovation Strategy 2021” and the “Comprehensive Package for Supporting Research Capabilities and Young Researchers,” the improvement of the system for competitive funding has been discussed in order to enable more effective and efficient use of research funds. If, during the calls for research proposals period, policies, etc. common to other competitive funding programs regarding the improvement of these systems and their operation are announced, JST will notify research institutions of these policies when they are applied to the calls for research proposals and operation of this program.

5.27 Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)

5.27.1 About implementation of proper systems in accordance with the “Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)”

The research institutions applying for this program and conducting research should comply with the contents of the “Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)” (revised on February 1, 2021) *.

Research institutions are requested to establish a system for managing and auditing research funds under their responsibility in accordance with the above-mentioned guidelines and strive for

proper execution of research funds. If the Ministry of Education, Culture, Sports, Science and Technology(MEXT) finds the system implementation of a research institution inadequate as a result of investigation of the status of system implementation in accordance with the above-mentioned guidelines, JST may take measures, such as reduction in the indirect costs of all the competitive funds distributed from the MEXT and the independent administrative corporations under its jurisdiction.

* For "Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)," visit the following web site:
https://www.mext.go.jp/a_menu/kansa/houkoku/1343904_21.htm

5.27.2 Submission of "Self-evaluation Checklist for Implementation of Proper Systems" based on "Guidelines for Management and Audit of Public Research Funds in Research Institutions (Implementation Standards)"

Before concluding an agreement for this program, each research institution is requested to establish a system for managing and auditing research costs in accordance with the above-mentioned guidelines, and submit Self-evaluation Checklist for Implementation of Proper Systems (hereinafter referred to as the "checklist"), and a report indicating the status of system implementation. (The contract will not be accepted unless the checklist is submitted.)

After April 1, 2023, please read through the information on the website below, download the FY2023 checklist form from the Cross-Ministerial Research and Development System (e-Rad), fill in the required information, and submit it to the Competitive Funding Coordination Office of the Promotion Policy Division, Research Promotion Bureau, MEXT by uploading it to e-Rad by the date on which the Contract Research Agreement is concluded.

Notwithstanding the above, contracts with research institutions that have submitted the FY2022 checklist will be accepted, but in this case submit the FY2023 checklist no later than December 1, 2023.

Organizations that do not conduct research with budget allocations or measures from MEXT or independent administrative corporations under its jurisdiction do not need to submit the Research Misconduct Checklist. For details, please visit the following website of MEXT. (The link below gives information on the FY2022 checklist. Please visit the MEXT website after April 2023 for information on the FY2023 checklist.) (only in Japanese).

https://www.mext.go.jp/a_menu/kansa/houkoku/1324571.htm

*Note: Research institutions must have their e-Rad environment available before they can submit the checklist. Please note that the registration of research institution usually takes about two weeks. For details on the procedure for using e-Rad, visit the website below.
https://www.e-rad.go.jp/organ/index.html

As the above guidelines include the viewpoint of "promoting the dissemination and sharing of information," research institutes are requested to disseminate this information actively by posting details of initiatives to prevent misconduct on their websites, etc.

5.28 Guidelines for Responding to Misconduct in Research

5.28.1 About implementation of proper systems in accordance with "Guidelines for Responding to Misconduct in Research"

Research institutions are requested to comply with the "Guidelines for Responding to Misconduct in Research" (Adopted by the Minister of Education, Culture, Sports, Science and Technology, August 26, 2014)* before applying for this program and performing research activities.

If the Ministry of Education, Culture, Sports, Science and Technology(MEXT) finds the system implementation of a research institution inadequate as a result of investigation of the status of system implementation in accordance with the above-mentioned guidelines, JST may take measures, such as reduction in the indirect costs of all the competitive funds distributed from MEXT and the independent administrative corporations under its jurisdiction.

* For "Guidelines for Responding to Misconduct in Research," please visit the following website:
https://www.mext.go.jp/b_menu/houdou/26/08/1351568.htm

5.28.2 About the submission of the checklist on the status of efforts in accordance with the "Guidelines for Responding to Misconduct in Research"

Before concluding an agreement for this program, each research institution needs to submit the checklist on the status of implementation in accordance with the "Guidelines for Responding to Misconduct in Research" (hereinafter referred to as the "Research Misconduct Checklist. (The contract will not be accepted unless the checklist is submitted.)

After April 1, 2023, please read through the information on the website below, download the FY2023 checklist form from the Cross-Ministerial Research and Development System (e-Rad), fill in the required information, and submit it to the Competitive Funding Coordination Office of the Promotion Policy Division, Research Promotion Bureau, MEXT by uploading it to e-Rad by the date on which the Contract Research Agreement is concluded.

Notwithstanding the above, contracts with research institutions that have submitted the FY2022 checklist will be accepted, but in this case submit the FY2023 checklist no later than September 30, 2023.

Organizations that do not conduct research with budget allocations or measures from MEXT or independent administrative corporations under its jurisdiction do not need to submit the Research Misconduct Checklist. (The link below gives information on the FY2022 checklist. Please visit the MEXT website after April 2023 for information on the FY2023 checklist.) (only in Japanese).

https://www.mext.go.jp/a_menu/jinzai/fusei/1420301_00003.html

*Note: Research institutions must have their e-Rad environment available before they can submit the checklist. Please note that the registration of research institution usually takes about two weeks. For details on the procedure for using e-Rad, visit the website below:

https://www.e-rad.go.jp/organ/index.html

5.28.3 About measures against misconduct in research activities in accordance with the "Guidelines for Responding to Misconduct in Research"

JST will respond strictly to any misconduct found in the research activities of this program as follows:

(i) Measures to cancel the agreement

If a specific misconduct, such as fabricating, falsification or plagiarism, is found in this project, JST will cancel or change the Contract Research Agreement and request for refunding of all or part of the Contract Research costs, depending on the nature of the misconduct. JST may not enter into a contract for the next and subsequent fiscal years.

(ii) Measures to restrict eligibility for application and participation

For a person involved in a specific misconduct in research papers or reports in this project or a person who is determined to have neglected the duty of care as a person responsible for the papers, reports, etc., although they cannot be determined to have been involved in the misconduct, JST will restrict eligibility for application for or participation in this program, depending on the degree of viciousness and responsibility for the specific misconduct.

If JST takes measures to restrict eligibility for application and participation, JST provides the information to persons in charge of competitive funds distributed from MEXT and the independent administrative corporation under its jurisdiction (hereinafter referred to as "MEXT-related competitive funding programs") and to those in charge of competitive funds distributed from other ministries and agencies and the independent administrative corporation under their jurisdiction (hereinafter referred to as "other ministry-related competitive funding programs"). This may also result in restrictions on eligibility for application for and participation in MEXT and other ministry-related competitive funding programs.

<table>
<tr><th colspan="3">Applicants subject to restrictions on application due to a specific misconduct</th><th>Degree of misconduct</th><th>Application prohibited period *</th></tr>
<tr><td rowspan="4">Those related to the misconduct</td><td colspan="2">1. Aggravated Misconduct because intended or planned at the start</td><td></td><td>10 years</td></tr>
<tr><td rowspan="3">2. Authors of publications guilty of misconduct</td><td rowspan="2">Person in charge of the publication (supervising editor, representative author, or those with equal responsibility)</td><td>Major influences on development of the research area or society, or strongly aggravated.</td><td>5-7 years</td></tr>
<tr><td>Minor influences on development of the research area or society, or weakly aggravated.</td><td>3-5 years</td></tr>
<tr><td>Other than the above</td><td></td><td>2-3 years</td></tr>
</table>

<table>
<tr><td></td><td>3. Those involved in misconduct other than 1 and 2 above</td><td></td><td>2-3 years</td></tr>
<tr><td colspan="2" rowspan="3">Those responsible for the publication based on misconduct but not related to the misconduct themselves (supervising editor, representative author, or those with equal responsibility)</td><td>Major influences on development of the research area or the society, or strongly aggravated.</td><td>2-3 years</td></tr>
<tr><td>Minor influences on the development of the research area or the society, or weakly aggravated.</td><td rowspan="2">1-2 years</td></tr>
<tr><td></td></tr>
</table>

* In principle, the period for which applications are prohibited starts from the fiscal year following that in which the improper use or similar was identified and the research funding returned. Eligibility for participation is also restricted for the fiscal year in which the improper use or similar was identified.

(iii) Measures against researchers who have been subject to restrictions on their eligibility for application for the competitive funding programs and for basic expenses

For researchers whose eligibility for application and participation have been restricted due to a specific misconduct in research activities that receive MEXT-related competitive funds, operating costs subsidies provided to national university corporations, Inter-University Research Institution Corporation and independent administrative corporations under the jurisdiction of MEXT, private school subsidies or other basic expenses, or other ministry-related competitive funds, JST will restrict eligibility for application and participation in the program.

(iv) Publication of misconduct case

If a researcher committed a misconduct in the research activities in this project, JST will publish the outline (researcher name, program name, affiliated organization, fiscal year of research, description of misconduct, and description of measures that have been taken) of the misconduct case. The description of misconduct case (name, type, research field and outline of misconduct case, name of expenses involved in misconduct, measures that were taken by research institution and by funding agency) are also, in principle, published by the MEXT.

The above-mentioned guidelines state that if it is determined that misconduct has been found, research institutions shall publish the results of investigation promptly. The research institutions

are requested to respond properly.
https://www.mext.go.jp/a_menu/jinzai/fusei/1360483.htm

5.29 Mandatory education on research integrity and compliance

Researchers who are to participate in this project shall receive education on research integrity to prevent misconducts in research activities, as requested in "Guidelines for Responding to Misconduct in Research," and on compliance, as requested in the "Guidelines for Management and Audit of Public Research Funds in Research Institutions."

During the conclusion of a contract research agreement after adopting a proposed research project, the principal investigator must submit a document that confirms that all researchers who are to participate in this project have received education on research integrity and compliance, and have understood the contents.

5.30 Handling of information, such as research projects, on e-Rad

JST handles the information related to each selected research project on e-Rad (program name, project title, name of affiliated research institution, name of principal investigator, amounts of budget, implementation period, and project summary) as the information to be released as set forth in Article 5, item (i) (a) of "Act on Disclosure of Information Held by Independent Administrative Corporations" (Act No. 140 of 2001). After selecting a research project, JST will publish this information on the website of the program, as appropriate.

5.31 Providing information to the Cabinet Office through e-Rad

The Sixth Basic Plan for Science, Technology, and Innovation (approved by the Cabinet on March 26, 2021) states that evidence-based policy-making (EBPM), in which policies are established on the basis of objective evidence, should always be practiced in the administration of science, technology, and innovation, and the information registered in the cross-ministerial R&D Management System (e-Rad) is used to evaluate the nationally funded R&D properly and plan effective and efficient comprehensive strategies, resource allocation policies, etc.

It is also requested to enter information on the research results, accounting performance and the execution performance of indirect costs for the competitive funds for an selected research project for each fiscal year in e-Rad.

This provides the Cabinet Office with the information necessary for macroeconomic analysis, such as information on the research results, accounting performance.

Please also refer to Chapter 6 (Submission via the Cross-ministerial R&D Management System).

5.32 Registering researcher information to researchmap

Researchmap (https://researchmap.jp/) is the largest researcher information database in Japan and the registered performance information can be published. The researchmap is also linked to e-Rad and the faculty databases of many universities to allow the registered information to be used by other systems as well. This eliminates the needs for researchers to repeatedly register the same performance in various applications and databases.

The information registered in the researchmap is also effectively used for investigation for

planning of national scientific and technological policies and for statistical utilization. Researchers are requested to register information to researchmap.

5.33 Patent application by JST

If a research institution will not acquire any rights for an invention, JST may acquire the rights. If the research institution does not intend to acquire rights for the invention, the researcher should convey the information on the invention promptly to JST in any format. (The above “information on the invention” refers to the information required for JST to determine whether or not an application can be filed, such as a copy of the invention report used in the research institution.)

JST will conducts a review based on the information, and as a result, if JST determines that the invention can be filed, the research institution and JST will conclude an agreement for transferring the right to receive a patent.

Chapter 6 Submission via the Cross-ministerial R&D Management System

6.1 Cross-ministerial R&D Management System (e-Rad)

The cross-ministerial R&D Management System (e-Rad) is a cross-ministerial system that provides a series of on-line processes to manage the publicly funded research programs under the jurisdiction of ministries and agencies (Acceptance of applications → Screening → Selection → Management of selected project → Registration of research results and accounting performance).

* The "e-Rad" is the abbreviation of the cross-ministerial R&D Management System, which is created by adding the capital letter of "e" of "Electric" to the capital letters of "Research and Development" for science and technology.

The e-Rad is only available in Japanese. Before submitting an application, applicants who do not read Japanese are expected to familiarize themselves with the content with the assistance of a research collaborator or member of their institute's staff who is proficient in Japanese.

6.2 Application method using e-Rad

Research institutions are requested to make an application using e-Rad.
For the application flow, refer to the flowchart.

Please be aware of the following points when submitting your application.

6.2.1 Pre-registration for using e-Rad

Research institutions and researchers must be pre-registered before e-Rad can be used.

①Registration of research institution

A research institution needs to be registered to e-Rad by the time of application. A research institution is requested to appoint one administrative representative in charge of the e-Rad who download the form of research institution registration from the e-Rad portal site (hereinafter referred to as the "portal site"), and apply by mail to us. Since registration takes several days, the research institution should perform the registration procedure more than two weeks before. Once the registration is completed, the research institution needs not to register the information again when applying for a programs under the jurisdiction of other ministries or agencies. Similarly, if the research institution has already registered its information in a programs under the jurisdiction of other ministry or agency, it need not register its information again.

②Registration of researcher

The research institution must register its researcher information and issue a log-in ID and a password.

For how to register researcher information, refer to the manuals, posted on the portal site, for the administrative representative of the research institution and for persons in charge of administrative work.

6.2.2 Application using e-Rad application

For application using e-Rad application by researchers, refer to researchers' manual posted on the portal site.

<Note>

①Application requires entry of application information on the website and the attachment of an application form.

The application form that can be uploaded is a single file having the maximum capacity of 30 MB. If you include image data in the file, be careful of the file size. If the upper limit is exceeded, contact a person in charge of program before uploading.

②The created application form file must be uploaded in PDF format. The e-Rad has a function to convert a WORD or Ichitaro file into a PDF file. The use of these functions and software is not always mandatory for PDF conversion, however, if you do use them, be sure to refer to the researchers' manual for usage and precautions.

③An application whose status is not changed to "Processing (Distribution institution)" or "Accepted" will be invalidated by the submission deadline. Confirm the application status on the "List of Applications and Approved Projects" screen.

If the status has not been changed despite the submission of application by the researcher and approval by the administrative representative of the research institution by the deadline, please contact the person in charge of SATREPS program.

④An incomplete application form will not be subject to screening. Be sure to read "Public Invitation Guideline" and "Procedure for Preparing Application Forms" and then fill out the form carefully (Do not change the format of the application form). JST does not accept a request to replace or return the application form.

6.3 Others

6.3.1 How to operate e-Rad

For how to operate e-Rad, visit the portal site (https://www.e-rad.go.jp/) or download the manual from the site. Be sure to agree to the terms of use before making an application.

6.3.2 Where to direct questions on how to use the e-Rad system

Questions about the program itself are answered by a person in charge of program, just as usual. Questions about e-Rad operation methods are answered by e-Rad Help Desk. Before asking questions, be sure to read the website for public invitation for this program and e-Rad Portal site carefully. JST will not answer any questions regarding the status of the screening or acceptance.

Questions about programs and procedures for preparing and submitting application documents	SATREPS Groups, Department of International Affairs, JST	03-5214-8085 10:00～12:00／13:00～17:00 ＊ Excluding Saturday, Sunday, public holidays and New Year holidays
Questions about e-Rad operation methods	e-Rad Help Desk	0570-057-060 (navi dial) 9:00～18:00 * Excluding Saturday, Sunday, public holidays and New Year holidays

○ SATREPS program website: https:/www.jst.go.jp/global/

○Portal site: https://www.e-rad.go.jp/

6.3.3 Availability of e-Rad

As a rule, e-Rad operates 24 hours a day, 365 days a year, but JST may stop the service for system maintenance. If JST decides to do so, it will be preliminarily notified on the portal site

Q&A

1. Q&A about invitation

Q: How many projects have been selected so far, and what sort of projects are they?

A: A total of 179 international joint research projects have been selected for this program so far（including projects in Infectious Diseases Control field）.

Selected Year	Number of Projects Selected	Selected Year	Number of Projects Selected
FY2008	12	FY2016	13
FY2009	20	FY2017	9
FY2010	17	FY2018	9
FY2011	10	FY2019	12
FY2012	8	FY2020	11
FY2013	10	FY2021	12
FY2014	10	FY2022	12
FY2015	14		

Please refer to the following website for an overview of each research project:

https://www.jst.go.jp/global/english/kadai/list.html

Q: What are the main changes in the FY2023 Invitation for Research Proposals compared to the previous FY?

A: The main changes in the FY2023 Invitation for Research Proposals are listed at the following website:

https://www.jst.go.jp/global/koubo.html(Japanese)

Q: From FY2023, applications may be allocated to a research area within the Environment and Energy research field for screening. Will the applicant be informed of the result of this allocation before the selection process?

A: You will not be informed before the selection process. You will be notified together with the results of the document screening.

Q: Following the change whereby applications to the two research areas that come under the Environment and Energy research field are received under a single category, are there any points to note when making an application via e-Rad, or any changes from the previous procedure?

A: When searching e-Rad for the Call for Applications, please use the search term 令和５年度 環境･エネルギー研究分野 and chose the call for FY2023. Unlike until FY2022, a search for the name of the research area alone will not display any search results.

Q: How are the effects of COVID-19 being taken into consideration? How are JST and

JICA handling the matter?

A: In principle, the Japanese researcher actively goes to the partner country to conduct international joint research, but if there is the possibility that travel to the partner country or the conduct of research in that country may be restricted, please consider how international joint research can be conducted under circumstances when travel is impossible, and take these into account in planning (such as alternative proposals for communication and training via remote systems). Also, as a rule, the interim period (see "3.1 Interim period") following provisional selection, in other words, the period during which the R/D and CRA are signed, will extend to the end of the fiscal year in which the project would be implemented, but flexibility will be used in the handling of proposals, including possibly allowing extensions of the interim period depending on the circumstances. During project evaluation (Mid-Term Evaluation and Terminal Evaluation), the evaluation will be conducted while taking into consideration the effects of COVID-19, if necessary.

2. Q&A about Implementation Structure in Japan

2.1 Principal investigator and lead joint researcher(s)

Q: Can a post-doc submit an application as principal investigator?

A: A Post-doc cannot apply as principal investigator or lead joint researcher.

Q: Can a researcher who is not a Japanese national submit an application as principal investigator?

A: As long as he or she is affiliated with a research institution in Japan, a non-Japanese national researcher can apply as principal investigator. Depending on the country of dispatch, however, the researcher may not be eligible for rights and exemptions imparted by treaties and other agreements with the partner country, including tax exemptions and legal immunity.

Q: Can a part-time staff member (visiting researcher, etc.) submit an application as principal investigator?

A: This is possible if the researcher can provide an implementation structure at a research institution in Japan for the duration of the research period. Whether it is possible to make an agreement and sign a contract with the research institution for the part-time staff member to be principal investigator depends on the contractual relationship between the research institution and the part-time staff member.

Q: On the premise that research will be implemented at the counterpart institution, can a Japanese national resident outside Japan submit an application as principal investigator?

A: In principle, this is not permitted. The program envisages a principal investigator based in Japan and the institution he or she is affiliated with conducting joint research with a principal investigator based in the partner country and the institution he or she is affiliated with.

2.2 Participants other than the principal investigator and the lead joint researchers

Q: Can post-doc students or graduate school or similar students participate in the research project?

A: Postdoctoral research fellows and graduate students can take on specific roles in the research project, and by being listed as research participants in the research plan documents, can participate as members in the project. Undergraduate students can also participate under similar conditions as part of the process of nurturing excellent researchers in Japan. Because of their status as students, graduate students and undergraduates cannot be dispatched to the partner country as overseas researchers using ODA costs, but if certain conditions are satisfied (concluding an employment contract with the affiliated institution, traveling together with an overseas researcher, etc.), it is possible to cover travel and the costs of employment of students as research assistants under JST contract research expenses. See the Contract Research Agreement Administrative Procedures etc. for details.

Q: Can a researcher who is not a Japanese national apply as an overseas researcher?

A: The SATREPS is based on Japan providing technical cooperation and building relationships with the partner country, so in principle, it assumes the dispatch of researchers who are Japanese nationals. Nevertheless, if there are no other researchers with specific skills required and a non-Japanese national is irreplaceable for the project, then that researcher may be dispatched as an overseas researcher as long as the partner country government accepts the dispatch. In such cases, the researcher can be dispatched under ODA costs (and in cases where dispatch as an overseas researcher is not possible, traveling to the partner country under JST contract research expenses is in principle possible, although the researcher may not be eligible for rights and exemptions applied under agreements with the partner country, including tax exemptions and legal immunity).

Q: Can researchers without a specific affiliation participate?

A: In principle, researchers without a specific affiliation cannot participate in the joint research. However it is possible for a participating institution (including the principal investigator’s institution) to give affiliation status (visiting researcher, etc.) to the

researcher so that he or she can participate in the research with that institution providing coverage and taking responsibility.

Q: Can a researcher affiliated with a research institution in a third country (not the partner country) participate in the project?

A: This is possible. However, it is essential that such a researcher have a status (such as visiting researcher) at a participating research institution (including the principal investigator's institution) and be under the auspices of that affiliated institution.

2.3 Participation of private-sector companies

Q: What requirements do private-sector companies need to satisfy to apply for the program?

A: The requirements include the company being incorporated in Japan.

Q: Can a private-sector company be a principal investigator's institution?

A: company conducting activities with a public nature can become the principal investigator's institution for a project. Even if the company is not conducting activities with a public nature, it can still become the principal investigator's institution if it makes a joint proposal with a university or similar institution.

Q: How can private-sector companies and similar organizations take part?

A: A company or similar organization may either take part as the principal investigator's institution, or may participate by one of the methods below.

a. The company or other organization concludes a Contract Research Agreement with the JST as a joint research institution, in which case it may take part as an institution responsible for research or implementation, etc.

b. Even if the company or other organization concerned does not conclude a contract research agreement with the JST, persons working for it may take part as members of the principal investigator's institution or a joint research institution.

Furthermore, even if persons working for the company or other organization concerned do not become participants in the research project, it may be associated with the project as an external supporting institution (such as an advisory institution, an institution responsible for future implementation, or a contract institution undertaking test work or other work not including research components). Note: If a company is associated with project participation as an external supporting institution, Form 8 need not necessarily be submitted.

Q: What points need to be borne in mind when a private-sector company participates?

A: The following points need to be borne in mind.

- Before JST can conclude a Contract Research Agreement with a company or similar entity, it screens the company to determine whether the contract is possible and what sort of form the contract should take. As a result of this screening, JST may require compliance with a particular form of contractual relationship. If the company's state of finances is markedly unstable, the contract may be judged unfeasible, preventing the research project from being conducted at the proposed research institution. In such a case, the proposer may be required to take action such as reviewing the implementation structure.
- The SATREPS program is based on the premise of joint research with a partner country. In addition to implementing the research, there are requirements for publication of outcomes and sharing of intellectual assets, and for outgoing transfer of samples and information, etc. The company is requested to confirm in advance with the partner country side that entering into such a relationship with private-sector affiliated researchers is not a problem.
- Salary etc. for the person in charge of the research (principal investigator/lead joint researcher) cannot be covered as direct expenses.
- If certain conditions are satisfied, it is possible to cover salary etc. for other research participants (members involved with a specific research item).
- When using ODA costs to procure goods, in principle a competitive procurement process should be used (either bidding or comparative quotes), based on specifications that do not require specific brands.

Details are available at the following website under Contract Research Agreement Administrative Procedures (for private-sector companies).

https://www.jst.go.jp/contract/index2.html (Japanese)

Q: Can the implementation structure described in the research proposal documents be changed during interviews or after selection?

A: The selection process is based on the research proposal documents, so the structure should be given careful consideration when writing the research proposal, in order to ensure that no need for unnecessary changes arises. However, adjustments etc. may be made if authorized by the Research Supervisor (RS), and changes may be requested during the process of JICA signing the R/D with the counterpart institution before commencing the international joint research. Given that this program is international joint research, as a rule, substitution of the principal investigator will not be allowed.

Q: Does having the project linked to ODA mean that the principal investigator needs to be stationed in the partner country (long term overseas dispatch)?

A: The principal investigator does not necessarily need to be stationed in the partner country, but it is considered important for the principal investigator to visit the partner country and manage the project on the ground. Technical cooperation projects allow for flexibility, including dispatch on a short-term shuttle basis. Nevertheless, in order to ensure that the activities in the partner country proceed smoothly and to enhance the effectiveness of the project, it is of course desirable for Japan-side researchers to be either be stationed in the partner country full time or close to full time. When planning the dispatch of researchers to the partner country, take into consideration that the Japan-side researchers are required to contribute through the joint research to developing the partner country's self-reliant research and capacity development, and that as project director the principal investigator is responsible for the dispatch of researchers overseas as part of the international joint research.

Q: Is it necessary to station Japan-side research participants other than the principal investigator in the partner country?

A: It is not necessarily the case that Japan-side researchers have to be stationed in the partner country, but an appropriate strategy is essential. In order for the joint research to proceed smoothly in the partner country (a developing country), and because the purpose of the project is capacity development of the developing country through joint research, if researchers are not stationed overseas, it is necessary for them to be regularly dispatched to the partner country and that their emphasis is on their research overseas, such as by spending three months in the partner country followed by one month back in Japan. Projects are selected through an overall evaluation that includes consideration of the Japan-side implementation structure described in the proposal.

3. Q&A about research expenses and contracts

3.1 Contract with JST

Q: Are there restrictions on how JST contract research expenses can be used?

A: Details regarding contract research expenses are available at the following website under Contract Research Agreement Administrative Procedures.
https://www.jst.go.jp/contract/index2.html (Japanese)

Q: Can the research contract with the lead joint researcher's institution in Japan be structured as subcontracting (see note) via the principal investigator's institution?

Note: Subcontracting in the research contract refers to a situation where only the principal

investigator’s institution signs a contract with JST, and a research contract is signed by that affiliated institution and the joint researcher’s affiliated institution.

A: Under the SATREPS program, a subcontracting structure is not used for research contracts. JST concludes separate research contracts with the research institutions that the principal investigator and lead joint researcher are affiliated with. * JICA only has a contractual relationship with the principal investigator's institution, not with any other institutions involved in the joint research.

3.2 Contract with JICA

Q: What level of authority is required for signing the Agreement and project contract between JICA and the principal investigator’s institution?

A: On the JICA side, the main Agreement (which must only be signed on the first occasion for each principal investigator’s institution) will be signed by the president of JICA, the annexes to the Agreement (signed for each project) will be signed by the director of the department responsible for the project, and the project contract will be signed by the vice-president in charge of finance and accounting. The principal investigator’s institution is requested to decide the signatories on its side corresponding to these positions, according to its own form of governance.

4. Q&A about Research proposal and submission via e-Rad

Q: Do Forms 1-9 have to be completed in Japanese?

A: In principle, Forms 1-9 should be completed in Japanese. However, if that is problematic, English is acceptable. English-language copies of the application forms are posted on the English-language SATREPS website.

https://www.jst.go.jp/global/english/koubo.html

The research proposal forms must be submitted via e-Rad, the Cross-ministerial R&D Management System. This system has some sections that require entry in Japanese. For those sections, seek assistance from a Japanese speaker.

Interviews in the selection process are also in principle conducted in Japanese, but if that is problematic, English is acceptable.

Q: The required information for Form 4 includes overseas institutions, but what specific I nformation should be given about research funding scheduled to be received or which has been applied for from an overseas institution?

A: At the time of application, applicants are requested to provide wide-ranging information on funding for which they have applied or which they are scheduled to receive. Please therefore give information on all such research funding from overseas, including sources such as competitive funding, grants from private foundations, and contract research fees or joint research fees from corporations.

Q: Is it OK to submit Form 7 using the name and official seal of an executive or management at a lower level in the organization, such as the dean, for the “Director?”

A: Please submit Form 7 in the name of the director of the institution (the president or chair of the board of a university), not an executive or manager at a lower level in the organization. It need not be stamped with their official seal. Form 7 is for the principal investigator, and does not have to be submitted by main joint researchers.

Q: On Form 8, what is meant by “Company official of participating business (having responsibility concerning the content of this document)?” Is it OK to use a personal seal for the “Official Seal?”

A: In the case of a company, it indicates someone, such as the head of the department, who can take responsibility for the actions of SATREPS participants. Please affix the official seal of the executive, not their personal seal. It need not be stamped with the company seal.

Q: Which organizations have to submit proposal Form 8?

A: Please submit Form 8 for all the corporations among the institutions participating in the study on the Japanese side. However, for corporations acting as external support institutions, this submission is voluntary. Submission is unnecessary for institutions falling under any of the following.

a. School corporations such as national university corporations, public universities, and private universities.

b. Public research institutions such as national and public research institutes, public-sector research and development institutes, and independent administrative corporations.

c. Institutes performing a public service such as public-service corporations (including general incorporated associations and general incorporated foundation)

Q: Is there a restriction on the number of SATREPS program applications that can be made per institution?

A: There is no restriction on the number of applications that can be made per institution. If multiple applications are made from a single institution, each set of research proposal documents is required to include a separate written approval (Form 7) from the director of the institution (president or chair of the board, etc.).

5. Q&A about an official request for ODA technical cooperation and implementation structure in the partner country

5.1 Official request for ODA technical cooperation

Q: How should I gain an understanding of the developing country’s needs?

A: Under the SATREPS program, one of the key perspectives applied when selecting

projects is whether a research proposal is in line with the needs of the developing country. Proposals are expected to show a proper understanding of the partner country needs, obtained through means such as prior contact and interaction in a research context. One useful reference is the Country Assistance Policy (an ODA policy that MOFA establishes by comprehensively taking into account factors such as the local political, economic, and social situations, development plan, and development challenges) which has been formulated for some countries. Country Assistance Policies are published on the MOFA website:

https://www.mofa.go.jp/mofaj/gaiko/oda/seisaku/kuni_enjyo.html

Furthermore, in order to conduct sustainable international joint research, a systematic approach is expected in the partner country, bringing in partner country government agencies, etc. The selection process takes into account whether the structure is adequate for that purpose. When setting up a project, we also recommend liaising in advance with the Japanese embassy in the partner country and with the local JICA office.

Another useful method of understanding the needs of a developing country is to attend area studies conferences and similar events, and talk with other participants who are active in the partner country.

Q: Where can I obtain the ODA request form?

A: Because the actual ODA request form is fixed by the government agency handling ODA in each country, for details of the ODA application form the counterpart institution should contact the government institution that covers it or the government agency handling ODA.

Q: In addition to the proposal documents submitted to JST, is it necessary for the government agency handling ODA in the partner country, at the instigation of the counterpart research institution in the partner country, to make a request for the implementation of an ODA technical cooperation project (submit a request for cooperation)?

A: It is essential for the partner country side to submit a request for ODA, in addition to the proposal documents for a research project submitted. Only projects where both the research proposal and the ODA request have been submitted are screened. If either of these documents is not received by the specified deadline, the project will be automatically excluded from selection.

Q: Is it necessary for the details of the technical cooperation project in the partner country to have already been fixed in the request form at the point that the proposal documents are submitted to JST?

A: You need to coordinate the content of the request from the partner country before the request form is submitted. In particular, as noted on the proposal forms, there

needs to be consensus between the Japan-side and the partner country side regarding the proposed research project title (English), research objectives, research outcome targets, research plans and implementation of plans, implementation structure, approximate amounts and details of machinery and equipment, personnel, etc. to be used, and research period, etc. After provisional selection, JICA will finalize detailed plans for the purpose of signing the R/D with the partner country institution. Please understand that as a result of that process, you may be required to modify the research plans presented in the proposal. The research project title (English) has to be the same as the project name on the ODA technical cooperation project request form. Ensure that there is sufficient coordination with the counterpart institution on this point. Please also include the word "Project" in the research project title (English), and do not use the expression "in [name of partner country]."

Q: Has each developing country been informed of the purposes and structure of the SATREPS program? Also, does the applicant in Japan need to be able to respond to the partner country's inquiries about procedures, etc.?

A: MOFA/JICA has informed the government agency handling ODA in each of the developing countries eligible for the program. However, applicants should be aware that the extent to which the program is known by researchers in the counterpart country may vary due to internal circumstances. Where necessary, please ask the counterpart researcher(s) (and their institution of affiliation) to confirm with the partner country government agency handling ODA.

5.2 Counterpart institutions, partner country researchers; relationships

Q: Is it possible to conduct joint research with multiple research institutions in the partner country?

A: Yes, it is possible to conduct joint research with multiple research institutions in a single partner country. In such cases, the names of all institutions must be listed in the ODA request form, and the main research institution of joint research in the partner country must be specified.

Q: Are companies and NGOs in other countries able to participate in a project?

A: The SATREPS program is implemented as a technical cooperation project on the basis of an official request from a partner country and international agreements between the partner country and Japan; in principle, the program does not cover private-sector companies or NGOs without government ownership. However, if the partner country's research institute is a government entity, private-sector companies and NGOs may participate in the research, provided that the research institute recognizes said organizations as collaborating partners and said organizations pay for their own expenses.

Q: Are international agencies and the partner country's private universities able to participate in the project?

A: Regional international agencies and private universities in the developing country are not excluded from participating. However, preconditions include approval by the partner country's government of the implementation of the ODA project by said international agency or private university, submission of an ODA request to the Japanese embassy via the official route through the government agency in the partner country granting privileges and immunities to international agencies and the government agency in the partner country handling ODA. In addition, an R/D (Record of Discussions) must be concluded during the Detailed Design Study conducted by JICA in the same manner as cases in which the counterparty is a government agency.

Q: If the principal investigator's institution in Japan has already signed agreements with the partner country government or research institution, is there any need for JICA to sign a new agreement of some form with the partner country side in order to implement the project?

A: Yes, it is necessary. The SATREPS program is a collaborative program linked with ODA, and projects are implemented as JICA technical cooperation projects based on international commitments between the two countries. Therefore, based on these international commitments, JICA must again sign documents such as an R/D with the partner country side.

6. Contact information

Note: Inquiries should preferably be made by email, except when urgent.

For inquiries on SATREPS Application Guideline or application form, please contact :

SATREPS Group, Department of International Affairs,
Japan Science and Technology Agency
Tokyo Headquarters, 8th Floor, K's Gobancho
7, Gobancho, Chiyoda-ku, Tokyo, 102-0076 Japan
E-mail: global@jst.go.jp
TEL : 03-5214-8085

For inquiries on framework of ODA technical cooperation or official request for ODA technical cooperation, please contact :

Office for Science, Technology and Innovation, and Digital Transformation, Japan International Cooperation Agency (JICA)
E-mail : gpgsd@jica.go.jp

Appendix 1. Countries eligible for the SATREPS program

No.	Region	Name of Country
1	Asia	India
2		Republic of Indonesia
3		Kingdom of Cambodia ＊
4		Democratic Socialist Republic of Sri Lanka
5		Kingdom of Thailand
6		Nepal ＊
7		Islamic Republic of Pakistan
8		People's Republic of Bangladesh ＊
9		The Democratic Republic of Timor-Leste ＊
10		Republic of the Philippines
11		Kingdom of Bhutan ＊
12		Socialist Republic of Viet Nam
13		Malaysia
14		Republic of Maldives
15		Mongolia
16		Lao People's Democratic Republic ＊
17	Middle East	Republic of Turkey
18		Palestine Liberation Organization
19		Hashemite Kingdom of Jordan
20	Europe	Republic of Azerbaijan
21		Republic of Armenia
22		Republic of Albania
23		Republic of Uzbekistan
24		Republic of Kazakhstan
25		Kyrgyz Republic
26		Georgia
27		Republic of Kosovo
28		Republic of Tajikistan
29		Turkmenistan
30		Republic of Serbia
31		Bosnia and Herzegovina
32		Republic of North Macedonia
33		Republic of Moldova
34		Montenegro

No.	Region	Name of Country
35	Africa	People's Democratic Republic of Algeria
36		Republic of Angola ＊
37		Republic of Uganda ＊
38		Arab Republic of Egypt
39		Kingdom of Eswatini
40		Federal Democratic Republic of Ethiopia ＊
41		State of Eritrea ＊
42		Republic of Ghana
43		Republic of Cape Verde
44		Gabonese Republic
45		Republic of Cameroon
46		Republic of The Gambia ＊
47		Republic of Guinea-Bissau ＊
48		Republic of Kenya
49		Republic of Cote d'Ivoire
50		Union of Comoros ＊
51		Republic of Congo
52		Democratic Republic of the Congo
53		Democratic Republic of Sao Tome and Principe ＊
54		Republic of Zambia ＊
55		Republic of Sierra Leone ＊
56		Republic of Djibouti ＊
57		Republic of Zimbabwe
58		Republic of Seychelles
59		Republic of Equatorial Guinea
60		Republic of Senegal ＊
61		United Republic of Tanzania ＊
62		Republic of Tunisia
63		Republic of Togo ＊
64		Federal Republic of Nigeria
65		Republic of Namibia
66		Republic of Burundi ＊
67		Republic of Benin ＊
68		Republic of Botswana
69		Republic of Madagascar ＊
70		Republic of Malawi ＊
71		Republic of South Africa
72		Republic of Mozambique ＊
73		Republic of Mauritius
74		Islamic Republic of Mauritania ＊
75		Kingdom of Morocco
76		Republic of Liberia ＊
77		Republic of Rwanda ＊
78		Kingdom of Lesotho ＊

No.	Region	Name of Country
79	Latin America	Argentine Republic
80		Antigua and Barbuda
81		Oriental Republic of Uruguay
82		Republic of Ecuador
83		Republic of El Salvador
84		Republic of Guyana
85		Republic of Cuba
86		Republic of Guatemala
87		Grenada
88		Republic of Costa Rica
89		Republic of Colombia
90		Jamaica
91		Republic of Suriname
92		Federation of Saint Christopher and Nevis
93		Saint Vincent and the Grenadines
94		Saint Lucia
95		Republic of Chile
96		Commonwealth of Dominica
97		Dominican Republic
98		Republic of Trinidad and Tobago
99		Republic of Nicaragua
100		Republic of Haiti ＊
101		Republic of Panama
102		Commonwealth of The Bahamas
103		Republic of Paraguay
104		Barbados
105		Federative Republic of Brazil
106		Belize
107		Republic of Peru
108		Republic of Bolivia
109		Republic of Honduras
110		United Mexican States
111	Pacific	Republic of Kiribati ＊
112		Cook Islands
113		Independent State of Samoa
114		Solomon Islands ＊
115		Tuvalu ＊
116		Kingdom of Tonga
117		Republic of Nauru
118		Niue
119		Republic of Vanuatu
120		Independent State of Papua New Guinea
121		Republic of Palau
122		Republic of the Fiji Islands
123		Republic of the Marshall Islands
124		Federated States of Micronesia

*LDC: Least Developed Countries

Note1: This table is subject to change depending on a country's situation.

Note2: The security situation and circumstances in parts of the partner country where research will be conducted may be examined as part of the selection process for proposals where they may result in restrictions on travel to the country and on the ability to implement the project.

Note3: Adequate supports from JICA may not be accessible if research will be conducted in a country where JICA does not have an office.

Note4: In this fiscal year, for diplomatic considerations the number of applications from a single country is limited to a maximum of twelve, and should this limit be exceeded the government of the partner country will be required to narrow them down.

Appendix 2. Instructions for research proposal forms

There is no overall restriction on the number of pages in the research proposal documents. However, a clearly legible font size should be selected (about 10.5 points on Windows) to ensure legibility when printed, and the content should be clear and simple, but cover all essential points.

Please add a running page number at the bottom of each page.

The comments, explanations, and examples in the forms are not needed when the forms are submitted. Please delete them before submission.

The research proposal forms, and Instructions on how to formulate the Target Outcomes Sheet in Form 2, are available from the following website.

https://www.jst.go.jp/global/koubo.html (Japanese)

https://www.jst.go.jp/global/english/koubo.html (English)

- The information given in Form 1 will be published if the project is selected. The completed form should fit on no more than 2-3 sheets of A4 paper.
- Items (a)-(j) need to be directly entered into e-Rad.
- If the proposal includes the participation of multiple collaborating institutions in Japan and/or counterpart institutions, the names and roles of all the institutions involved must be included in the Implementation Structure Concept Diagram on the next page.

Check the research field or area below that is the closest match for the proposed research project.

☐Global-scale Environmental Issues ☐Carbon Neutrality

☐Bioresources ☐Disaster Prevention and Mitigation

Please be sure to choose the correct research area when submitting the research proposal via e-Rad.

Is this application for SATREPS Projects Promoting Focused Themes?

☐Yes ☐No

(To undergo screening as SATREPS Projects Promoting Focused Themes, the check box in the ODA application submitted by the research institution in the partner country must also be checked. Please refer to Section 2.8 (How to apply))

(a) Title of proposed research project (Japanese)	Do not include a subtitle in the proposed research project's title.
(English)	Include the word "Project" in the English title, and do not use the expression "in [name of partner country]." **Make sure to use the same title as the counterpart's ODA technical cooperation project application.**
(b) Research period	____ years Give the period of joint research agreed with the counterpart institution. It does not include the time leading up to the signing of the R/D (about six months).
(c) Total research expenses (Japan: JST contract research expenses)	Give in thousand yen units (round to the nearest 1,000). Total ____,000 yen (including indirect expenses)
(ODA project expenses)	Total ____,000 yen (no indirect expenses)
(d) Principal investigator's name and title	Give the principal investigator's name and title.
(e) Principal investigator's affiliation	Give full title of affiliated institution for principal investigator, including the name of institute, department/laboratory.
(f) Collaborating institutions in Japan	Give full titles of affiliated institutions for **all** researchers, including the name of institute, department/laboratory.
(g) Counterpart country	Give the name of the country in either Japanese or English. (If there is more than one partner country, list all countries with which an actual R/D will be signed.)
(h) Counterpart institution(s)	Give names of institutions in both Japanese and English. The Japanese rendering may be omitted if none exists (when completing the form in English). If there are multiple counterpart institutions, list the principal institution before the collaborating institutions.
(i) Project objective	(Approx. 120 words) * If responding in English, add a translation into Japanese (Max. 250 Japanese characters).

(j) Outline of project	(Approx. 120 words) * If responding in English, add a translation into Japanese (Max. 250 Japanese characters).

(Continued on next page)

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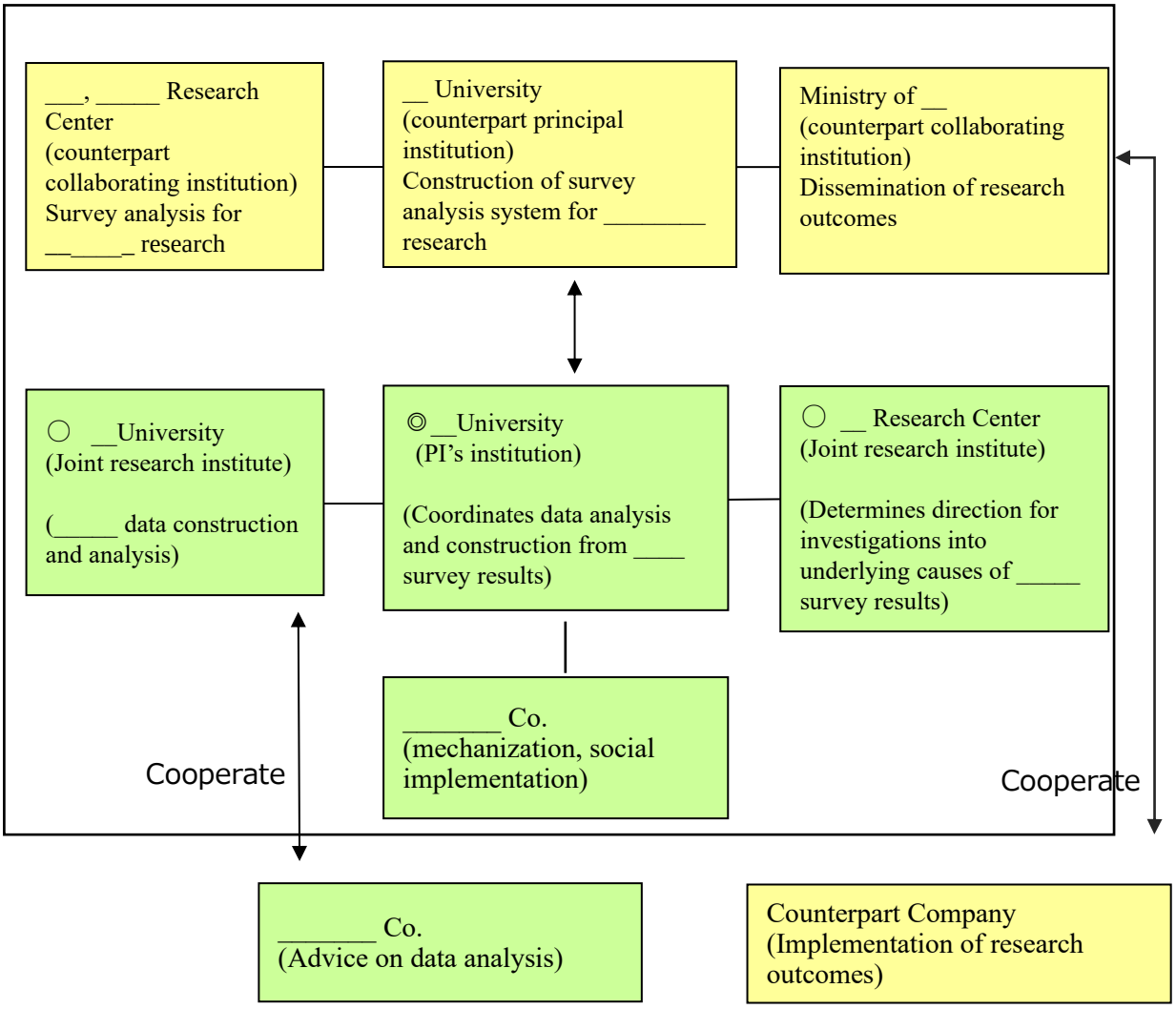
Implementation Structure Concept Diagram

Provide a diagram of the implementation structure for the research theme.
Make sure to clearly show the division of roles between the Japanese institution and the counterpart institution, together with the structure of links between institutions. The following diagram is just one example, and external supporting institutions need not necessarily be included.



Note: Please use the following symbols to indicate categories in the research framework on the Japanese side.

Principal investigator's institution: ◎

Participating institution that has entered into a contract research agreement with the JST (joint research institution): ○

Participating institution that has not entered into a contract research agreement with the JST: No symbol

Note: Please list all the institutions participating in the study on the Japanese side in Form 3.
Note: Please submit Form 8 for all the corporations among the institutions participating in the study on the Japanese side. However, for corporations acting as external support institutions this submission is voluntary.

- Include figures or tables if necessary. Black-and-white copies are used for assessment, so make sure that any figures or tables are comprehensible without color. Print out in black and white and confirm that the text in the image is clearly legible before submitting.
- Form 2 must not exceed 12 A4 pages. Please use a font size of at least 10.5 points. To ensure impartiality, forms exceeding 12 pages will be considered non-compliant, and excluded from assessment. Using small print or small figures/tables, reducing the space between lines to fit within the 12-page limit, or using reduced-size (2-in-1) copies to fit two pages of information onto one page is not acceptable.

1. Need underlying research theme that contributes to resolving global issue(s)

(1) Need underlying research theme that contributes to resolving global issue(s)

(1-a) International issue addressed by the research initiative

Specify the global issue (unresolved science and technology issue, and the socioeconomic disadvantages and international trends attributable to it) addressed by this research initiative.

(1-b) Role played by the research initiative in working toward the resolution of this international issue

Specify the role to be played by this research initiative in contributing to the resolution of the issue named in (1-a), including the significance of its contribution to resolving global-scale issues and its originality/novelty in scientific, technological, and academic terms.

(2) Partner country needs

(2-a) Need for the research project in the partner country

Specify how the research initiative can contribute to meeting the needs of the partner country, including a description of current status and issues associated with the partner country's socioeconomic and science and technology background. Give a description of the structure and capacity etc. of the counterpart institution, and a description of the need for assistance and effectiveness of assistance.

(2-b) Contribution of this research initiative to meeting the needs of the partner country

Specify the role to be played by this research initiative in meeting the needs of the partner country named in (2-a), and the extent to which it can contribute.

*If a Japanese Country Assistance Policy or Rolling Plan has been produced for the partner country**, describe how this research initiative is related to these, focusing on how well it fits with the partner country's needs, development strategy, etc.

*If it can also be expected to contribute to countries other than the partner country, specify how this will happen.

**See the following pages on the MOFA website and the JICA Global Agenda.

https://www.mofa.go.jp/mofaj/gaiko/oda/region/index.html (Japanese)

https://www.mofa.go.jp/policy/oda/assistance/index2.html (English)

ODA policies (Rolling Plans):

https://www.mofa.go.jp/mofaj/gaiko/oda/seisaku/kuni_enjyo.html (Japanese)

https://www.mofa.go.jp/policy/oda/policy.html (English)

https://www.jica.go.jp/activities/index.html(Japanese)

2. Target Outcomes Sheet

Create a Target Outcomes Sheet for the proposed research project.

An explanation (in Japanese) of how to create a Target Outcomes Sheet can be downloaded from the following website, including a template and descriptions of each of the items.

https://www.jst.go.jp/global/koubo.html (Japanese)

https://www.jst.go.jp/global/english/koubo.html (English)

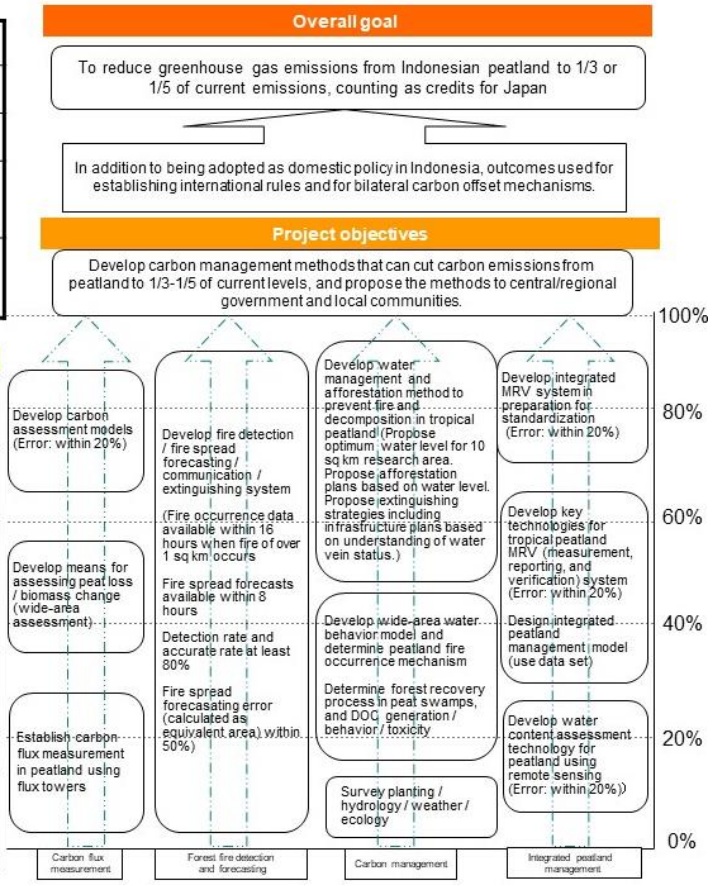
After filling out the template, attach it as part of Form 2 like the example below (for format, use PDF etc.)

Target Outcomes Sheet (example)

Research project title	Wild Fire and Carbon Management in Peat-forest in ■■
Principal investigator (affiliated institution)	■■ ■ (■■■■■ ■■)
Research period	Adopted in 2023 (June 1, 2023-March 31, 2029)
Partner country/Main partner country research institution	Republic of ■■ /National Standardization Agency of ■■ University of ■■, ■■ National Institute of Aeronautics and Space, Forestry Research and Development Agency (FORDA)
Related SDGs	Goal 13. Take urgent action to combat climate change and its impacts Goal 12. Ensure sustainable consumption and production patterns

Contingent outcomes

Contribution to Japanese government, society, and industry	- Utilization in climate change frameworks at global level - Commercial application of outcomes by Japanese companies
Development of science and technology	- Preservation of tropical forests (preservation of ecology / biodiversity) - Feedback to successor entity (Hyper)
Acquisition of intellectual property, international standardization, access to bioresources, etc.	- Fire detection system using satellites - Equipment for quantitative determination of carbon emissions - Development of weirs, methods for restoring forest - Samples of peat decomposition microorganisms, vegetation that can grow in a strongly acidic environment
Training Japanese human resources capable of working on the global stage	- Training young Japanese researchers resources to be able to work internationally (ability to lead international conferences, publish papers in peer-reviewed journals, etc.)
Building of technology and human networks	None
Other practical outcomes (recommendation documents, academic publications, programs, manuals, data, etc.)	- Fire detection system using satellites - Understanding of carbon flux and carbon dynamics in tropical peatland - Understanding of water behavior mechanisms



3. Research Objectives

- Specify the objectives of this research ("Overall goal" in the Target Outcomes Sheet in Section 2 above; include specific initiatives [scenarios and prospects] for scientific and technological developments that can be expected to contribute to resolving global-scale issues within 5–10 years of project conclusion [medium term], training of scientists and technical staff, creation of new industries, policy achievements, and contributions to society).
- To the fullest extent possible, address the issue of contributing to the achievement of Japan's major science and technology policies, such as policies set out in the 6th Science, Technology, and Innovation Basic Plan, etc.

4. Project Objectives

- Specify the target outcomes of the research initiative ("Project objectives" in the Target Outcomes Sheet in Section 2 above; knowledge, technology, materials, systems, recommendations, etc. that the research is attempting to achieve during the research period) and give quantitative specifications (for functions, systems, economy, etc.) that clarify the nature and levels of the target outcomes.
- The items in the description should be consistent with those in the Target Outcomes Sheet.

5. Plan to practical application and feasibility

(1) Plan of activities to be implemented during the research period

- Specify the plan of activities to be implemented during the research period with a view to the utilization of research outcomes in society (including their content, timing and duration, budget, method, and prospects of achievement).

(2) Initiatives for utilizing research outcomes in society after the end of the research period

- Specify initiatives to be implemented after the end of the research period (including their content, timing and duration, budget, method, and prospects of achievement), describing who will utilize the results

achieved among the objectives of the research project (Section 4. Project Objectives) and in what way, with the aim of achieving the project's overall goal (Section 3. Research Objectives).

(3) Participation by partner country government agencies/private companies that may be able to act as entities responsible for social implementation and adoption
- Specify when and how you will collaborate with organizations that may be able to act as entities responsible for social implementation, not only during the research period but also after its end.

6. Research plans and implementation of plans

(1) Overall research activities and research plans
- Use the form below to indicate a basic schedule for achieving the research outcome targets set out in Section 4 ("Project Objectives"), indicating research items and milestones (timing and judgment criteria for assessing the level of achievement of the research partway through the research period).
- Please describe the planned activities in detail in the text in such a way that they correspond with the table.

(2) Currently anticipated issues and their solutions
- Describe currently expected issues, together with solutions proposed for such issues, in attaining the research objectives set out in Section 3 ("Research objectives").

Research item/activity	Provisional Year*	Year 1	Year 2	Year 3	Year 4	Year 5
1.Research item 1 (Outcome 1) 1-1 Research activity 1-1 (Activity 1-1) 1-2 Research activity 1-2 (Activity 1-2) Activity to utilize outcomes 1	Gather information for ____	Realization of ____				
2. Research item 2 (Outcome 2) 2-1 Research activity 2-1 (Activity 2-1) Activity to utilize outcomes 2						
3. Research item 3 (Outcome 3) 3-1 Research activity 3-1 (Activity 3-1) Activity to utilize outcomes 3						

Achievement of ____

long-term researcher dispatch

Realization of ____

Proposal of ____

Establishment of ____

Cooperation with ____ company

*The provisional selection period is used to prepare for the commencement of research. Full-scale research activities are to begin once the project officially starts. Please see section 3.1(Interim period) of the Public Invitation Guideline for details of activities to be carried out during the interim period.

(3) Collaboration and division of functions etc. with counterpart institution for each research item
* Rotating the table sidewise and reducing the space between lines is allowed with the following table. However, please use a font size of at least 10.5 points.

Research item/activity	Details of research to be conducted jointly	Roles of Japan-side institutions (Leader's name)	Roles of partner country institutions (Leader's name)	Plan for travel to partner country by Japan-side researchers *1	Plan for inviting researchers from partner country to Japan *2	Machinery and equipment provided to partner country *3
1.Research item 1		Research for ○○ （AA bb）	Survey for ×× （CC dd）			
1-1 Research activity 1-1						
1-2 Research activity 1-2						
2.Research item 2						
2-1 Research activity 2-1						
2-2 Research activity 2-2						
3. Research item3						
3-1 Research activity 3-1						
3-2 Research activity 3-2						
3-3 Research activity 3-3						

Note 1. - Give the plan for visits required by Japan-side researchers, in terms of the number of days per visit and the number of visits.
- Give the plan for visits by the principal investigator for the purpose of overseeing the project.
(Give information in this format: Year 1: __ days x _ visits, Year 2: __ days x _ visits, …)
- Give details of researchers who can follow the principal investigator and be stationed in the partner country full-time or close to full-time.
(Give information in this format: Name/affiliation/position/age/specialty, stationed for ___ days per year. If there are multiple researchers in this category, give the same information for each researcher. If there are none, write "N/A.)

Note 2. - To the extent possible give plans for inviting people from the partner country to Japan (length of visit, number of people, etc.)
- In particular, describe any plans for long-term visits as government-sponsored foreign students, JICA long-term trainees, or using similar schemes.

Note 3. - List the main items of machinery and equipment provided to the partner country, including their main specifications (differentiate between general purpose machinery and equipment and machinery and equipment requiring customization/special order), estimated price, country of purchase (differentiate between local purchases and purchases in Japan). Machinery and equipment maintenance (consumables, spare parts, inspection, adjustment, repair, etc.) and running costs (electricity/gas/water, raw materials, operator labor costs, etc.) should in principle be covered by the partner country.

(Continued on next page)

(Continued from the previous page)

(4) Capacity development plan

(4-a) Policies and plans on the Japanese side

- Describe the system for proceeding with research and the development of collaborative frameworks with government agencies and the private sector on the Japanese side, as well as the policy and plans for capacity development at the organizational, individual, and external link levels, including training and capacity development for researchers.

(4-b) Policies and plans on the partner country side

- Describe policy and plans for capacity development at organizational, individual, and external link levels, including construction of links between the counterpart institution's research implementation structure and administrative entities and the private sector, and training and capacity development of researchers.

7. Basis for research and state of preparations

(1) Current basis for research

(1-a) Research and research outcomes to date

- Describe the research outcomes that will form the basis for the progress of this research initiative, and of the history of research by the research proposer himself or herself (and if necessary, research participants) and its results, using sources including previous research data.

(1-b) List of academic papers and books (author, title, journal, volume/page/year of publication)

- Give details of recent books and papers published in academic journals etc. by researchers included in the implementation structure, focusing on important publications that are relevant to the proposal. Select up to 10 publications for the project as a whole, and list them in date order, with the most recent first.

(1-c) List of associated patents (application No./inventor/title/applicant/date of application)

- Give details of patents applied for recently by research participants, selecting important applications that are relevant to the proposal. Select up to 10 patents for the project as a whole.

(2) State of preparation in conjunction with counterpart institution

- Describe the construction of infrastructure at the counterpart institution, the basis of research by the counterpart institution that was the reason for choice of institution, the state of coordination with partner country's government agencies, etc., and the state of preparation for international joint research.

With respect to the state of preparation of the principal investigator and the main researchers in the partner country, describe joint research and their networking track record, including the reason for selection in Form 5. If an agreement has already been signed with the counterpart institution, give details of the agreement and current contact and interaction with the institution.

*If you have previous experience of activities in this area, please also describe your knowledge of the site of activities and the content of past activities.

(3) Prospective locations of activities (including research sites)

-Please specify the locations where activities will be conducted, because they must be assessed for any potential public order issues.

(4) Ethical considerations

- State any requirement for inspection of compliance with ethical standards of the country where the research is implemented (partner country or Japan), and the status of any such inspection.

(Continued on next page)

(Continued from the previous page)

(5) Consideration of the handling of genetic resources and state of preparation
-When obtaining or using genetic resources (including related traditional knowledge) from another country, including the partner country, in the process of a project, please describe specific measures deemed necessary for promoting R&D in light of international rules, domestic and international legislation, and other regulations*, as well as the status of compliance by partner company research institutions or related government ministries, and other bodies.

*The Convention on Biological Diversity, the Nagoya Protocol, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGR), and related legislation and other regulations of the country providing the genetic resources and the country where they are used all apply. Please see 5.20.1“Acquisition and use of genetic resources” and the webpage https://www.jst.go.jp/global/iden.html (Japanese) for details.

(6) Status of consideration of handling of intellectual property and similar
-Please describe the status of meetings with the partner country research institution concerning matters including the ascription of the results of the study and their implementation.

Note: Please be careful about intellectual property management with the goal of reliably securing the results of the study.

(7) Improvements from past proposals (write only where applicable)
- If you have submitted a similar proposal in the past, describe the improvements that have been made in your current proposal.

- List the researchers expected to participate in the Japan-side research team, giving name, researcher ID No., affiliation, position, specialty, male/female, age, effort, and a brief outline of research responsibility.
- Japan-side participants must be (1) affiliated with a research institute in Japan, and (2) not included in the list of members of the partner country's institution.
- For the "Type" column, enter the appropriate classification symbol(s) as shown below:

  Principal investigator・・・◎

  Lead joint researcher*・・・○

  *The lead joint researcher is a single principal investigator from the joint research institution that has concluded a contract research agreement with JST.
- The principal investigator and the lead joint researcher in this list must be consistent with the principal investigator (principal investigator's institution) and the lead joint researcher (joint research institutions) on Forms 4 and 6.

Name (Researcher ID No.[*1])	Type	Affiliated institution, departments, position	specialty, male/female	Age as of April 1, 2023	Effort[*2] (%)	Research responsibility in project	Experience of working on SATREPS project (specify project)
__ ___ (XXXXXXXX)	◎	____ University ____ Faculty ____ Department Professor	forestry science, male		__%	Overall management of the research, _____	
__ ___ (XXXXXXXX)	○	____ University Associate Professor	aquatic bioscience, female		__%	_____	
__ ___ (XXXXXXXX)		__Research Center Research fellow			__%	_____	
Researcher A (XXXXXXXX[*3])		____ University ____ Faculty ____ Department Post-doc		[*3]	__%	_____	

[*1] For the Researcher ID No., give the ID No. registered with e-Rad. Each lead joint researcher intending to conclude a Contract Research Agreement with JST must acquire a Researcher ID No. in advance of the Contract Research Agreement.

[*2] This is based on the Council for Science and Technology Policy's definition of 'effort', which is "the percentage of working hours required for conducting the relevant research when the researcher's total annual working hours are 100%". Note that "total working hours" does not refer only to the number of hours spent in research activities but to the substantive total working hours, including educational and medical activities.

[*3] If the appointment of a researcher has not been finalized at the application stage, "Researcher A" etc. can

be used instead of the researcher's name. In such cases, the Researcher ID No., affiliated institution, and current position etc. can be left blank for that researcher, but other items (age, effort, research responsibility in project) should be completed as conditions envisaged for the post.

Give the following details for the Japan-side principal investigator.

Principal investigator

Name		
Researcher ID No.	(e-Rad Researcher ID No.)	
Date of birth	19__ (year) __ (month) __ (day), (Age: years as of April 1, 2023)	
Affiliated institution		
Affiliated institution code	(e-Rad code for affiliated institution)	
Department/Title		
Academic background (University onwards)	(Example) 20__: Graduated from ___ University Faculty of ___ 20__: Completed Masters course in ____, ___ University ___ Graduate School (Advisor: ____Professor) 20__: Completed Doctoral course in ____, ___ University ___ Graduate School (Advisor: ____Professor)	
Research background (Main professional appointments and research)	(Example) 19__-20__: Research Associate, __ University, Faculty of __ Researched _____ under Professor __ Since 20__: Researcher at ___ Research Center Conducting research into __ under Dr. __	
Age at which retirement from current position is scheduled	_____ years of age	
Contact Information of the Principal investigator	Postcode:	
	Address:	
	TEL:	FAX:
	E-mail:	
Principal investigator's institution administrative contact	Contact	
	Position/title	
	Institution/ affiliated dept.	

	Administrative contact information	Postcode:	
		Address:	
		TEL:	FAX:
		E-mail:	

Please fill in the details of any grants under national competitive funding systems or other research grant schemes, etc. (including private-sector foundations/overseas institutions*) that the principal investigator and lead joint researchers are currently receiving, are currently applying for, or are intending to apply for. For each funding program, include details of the research project title, amount of research expenses, research period, roles, effort, and differences from/relationship to the proposed research project. [See Section 5.2 (Measures against unreasonable duplication and excessive concentration), and the Q&A.]

*The Integrated Innovation Strategy 2020 stipulates that "Information disclosure on the status of acceptance of overseas funding is a condition at the time of application for research funding." In light of this, from the FY2023 Invitation for Applications, research funding from overseas must also be described in the form concerning grants, etc. from funding programs. Please list all types of research funding from both within Japan and overseas in addition to competitive funding, including other sources such as grants from private-sector foundations and contract research fees or joint research fees from corporations.

Principal investigator (research proposer): Name _____ _____

Funding program [1)]	Research project title	(1) Research expenses[2)] (entire term) (2) " (FY2023) (3) " (FY2023) (thousand yen)	Research period and status (In progress / Under application)	Role[3)] (Principal/ Co-researcher)	Effort[4)] (Proportion of time allocated) %	Affiliated institution and position at the time of implementation/application[5)]	Differences from/relation to proposed research project
SATREPS (This proposal)	_____	(1) 150,000 (thousand yen) (2) 30,000 (thousand yen) (3) 5,000 (thousand yen)	2023-2027 (Under application)	Principal	30%	Affiliation and position described in Form 3	
Grants-in-Aid for Scientific Research (S) (Kakenhi Kiban Kenkyu (S))	_____	(1) 100,000 (thousand yen) (2) 20,000 (thousand yen) (3) 20,000 (thousand yen)	2017-2023 (In progress)	Principal	30%	Affiliation and position described in Form 3	_____
SATREPS	_____	(1) 100,000 (thousand yen) (2) 25,000 (thousand yen) (3) 20,000 (thousand yen)	2018-2023 (In progress)	Co-researcher	10%	Affiliation and position described in Form 3	_____

Funds for Integrated Promotion of Social System Reform and Research and Development	_____	(1) 32,000 (thousand yen) (2) 8,000 (thousand yen) (3) 8,000 (thousand yen)	2022-2025 (Under application)	Co-researcher	5%	__ University, Faculty of __	_____

1) Write this proposal on the top, then give details of grants etc. currently received, or already finalized, listing the grants in order of size of research expenses (entire term) with the largest first. Then give details of grants etc. already applied for or scheduled to be applied for (mark the project as "Under application" etc. under Status.)
2) Under Research expenses, give the amount received by the researcher in person (including in-direct expenses).
3) Under Role, specify the researcher's role (principal researcher or co-researcher etc.) in each project.
4) Under Effort, give a figure based on the Council for Science and Technology Policy's definition of 'effort', which is "the percentage of working hours required for conducting the relevant research when the researcher's total annual working hours are 100%". Note that "total working hours" does not refer only to the number of hours spent in research activities but to the substantive total working hours, including educational and medical activities. Give the figure envisaged after the project is selected for the SATREPS program.
5) Please give the affiliated institution and role if these are different from those at the time of applying to this program.
* If false information is provided here, the application may be rejected, or have the selection decision reversed or the project budget reduced.

Lead joint researcher: Name _____ _____

Funding program [1]	Research project title	(1) Research expenses[3] (entire term) (2) " (FY2022) (3) " (FY2023) (thousand yen)	Research period and status (In progress / Under application)	Role[2] (Principal/Co-researcher)	Effort[4] (Proportion of time allocated) %	Affiliated institution and position at the time of implementation/application[5]	Differences from/relation to proposed research project
SATREPS (This proposal)	_____	(1) 40,000 (thousand yen) (2) 5,000 (thousand yen) (3) 0 (thousand yen)	2022-2027 (Under application)	Co-researcher	10%	Affiliation and position described in Form 3	
SATREPS	_____	(1) 80,000 (thousand yen) (2) 30,000 (thousand yen) (3) 30,000 (thousand yen)	2018-2023 (In progress)	Co-researcher	15%	Affiliation and position described in Form 3	_____
Grants-in-Aid for Scientific Research (S) (Kakenhi Kiban Kenkyu (S))	_____	(1) 70,000 (thousand yen) (2) 25,000 (thousand yen) (3) 20,000 (thousand yen)	2019-2023 (In progress)	Principal	10%	__ University, Faculty of __	_____
Funds for Integrated Promotion of Social System Reform and Research and Development	_____	(1) 32,000 (thousand yen) (2) 8,000 (thousand yen) (3) 8,000 (thousand yen)	2021-2024 (Under application)	Co-researcher	5%	Affiliation and position described in Form 3	_____

- To the extent possible, give the joint research partner country, counterpart institution, research location, partner country principal investigator's name, title, profile, research activities and role in joint research, etc.
- To the extent possible, describe collaborative relationships and previous contacts with counterpart institutions, including particulars for which the counterpart institution is considering making an application for technical cooperation.
- The outline for each counterpart institution is generally about one page of A4 paper, but as it is important to give all the necessary information, no specific restriction is placed on size.
- If conducting joint research with multiple research institutions in one partner country, it is necessary to specify the research institution that will be the main joint research entity in the partner country. For that reason, the main research institution in the partner country should be listed as the principal institution, and the other research institutions in the partner country should be listed as collaborating institutions. Normally, only information concerning a single researcher should be given for each counterpart institution.
- If conducting joint research with multiple partner countries, the information for the principal institution (and collaborating institutions) should be given for each country.
- If organization charts etc. for the counterpart institutions are available, include them in the text.

1. Principal investigator of principal research institution in partner country (provide this information for each of the partner countries)

<table>
<tr><td>Name</td><td colspan="2">(Give in alphabetic characters)</td><td>Nationality</td><td></td></tr>
<tr><td rowspan="3">Affiliated institution</td><td colspan="4">Japanese name: (omit if Japanese name does not exist)</td></tr>
<tr><td colspan="4">English name: (English name is essential)</td></tr>
<tr><td>Country</td><td></td><td>Position/title</td><td></td></tr>
<tr><td rowspan="3">Background</td><td>Highest level of education attended</td><td colspan="3">20__ (year): Graduated from __ University Faculty of ___</td></tr>
<tr><td>Highest degree earned</td><td colspan="3">20__ (year): PhD (__), __ University</td></tr>
<tr><td>Main professional appointments and research, etc.</td><td colspan="3">Example:
19__-20__: Research Associate, ___University, Faculty of _ Research into _____
20__-20__: Researcher, ___ University, Faculty of ___ Pursued research into _____</td></tr>
<tr><td>Role in joint research</td><td colspan="4">- Describe the researcher's specific role in the joint research.</td></tr>
<tr><td>Reason for selecting the principal investigator at the counterpart institution and previous contacts</td><td colspan="4">- Describe the reason for selecting the principal investigator at the counterpart institution, previous joint research projects and other collaborations with the principal investigator on the Japanese side, and the current status of contact.</td></tr>
</table>

(For reference:) Other participating researcher(s) at same institution	- For each researcher, give name, position/title, and role.
(For reference:) Request for ODA technical cooperation submitted by counterpart institution	- Describe as far as possible the particulars of the request for ODA technical cooperation to be submitted by the counterpart institution. When implementing joint research with a number of countries, describe as far as possible the particulars of the requests for ODA technical cooperation to be submitted by the counterpart institution in each country.

2. Main researcher of collaborating institution in partner country (provide this information for each of the collaborating institutions)

Name	(Give in alphabetic characters)		Nationality	
Affiliated institution	Japanese name: (omit if Japanese name does not exist)			
	English name: (English name is essential)			
	Country		Position/title	
Background	Highest level of education attended	20__ (year): Graduated from __ University Faculty of ____		
	Highest degree earned	20__ (year): PhD (__), __ University)		
	Main professional appointments and research, etc.	Example: 19__-20__: Research Associate, ___ University, Faculty of ___ Research into _____ 20__-20__: Researcher, ___ University, Faculty of ___ Pursued research into _____		
Role in joint research	- Describe the researcher's specific role in the joint research			
Reason for selection of lead researcher at counterpart institution and previous contacts	- Describe the reason for selecting the lead researcher at the counterpart institution, previous joint research projects and other collaborations with the principal investigator on the Japanese side, and the current status of contact.			
(For reference:) Other participating researcher(s) at same institution	- For each researcher, give name, position/title, and role			

- Submit the plan (budget) for contract research expenses from JST, listing expenses by category. For 2., create and fill in a table of contract research expenses for each research institution that concludes a contract research agreement with JST. For 1., Please fill in the total amount of contract research expenses of all research institutions that you filled in in 2. above.
- The start of the research period varies according to when the R/D is signed (as described on page 30 of the Invitation for Research Proposals). Consequently, the specific FY is not required for this form (Example FY is written only for a guide).
- The uses for which JST contract research expenses can be disbursed are explained on chapters 2.5 and 3.4.
- When a project is selected, the actual budget available for research may not match the amount given in this research expenses plan. This is regarded as the plan at the application stage. After selection, the plan will be adjusted, including support for the counterpart institution, etc.

1. JST contract research expenses plan for whole research group

	Provisional selection period*1	Year 1 (FY2024)	Year 2 (FY2025)	Year 3 (FY2026)	Year 4 (FY2027)	Year 5 (FY2028)	Total (thousand yen)
Equipment							
Materials/Consumables							
Travel							
Personnel and services							
Other							
Subtotal: Direct expenses (thousand yen)							
Indirect expenses*2 (thousand yen)							
Total (thousand yen)							

*1 Expenses for the provisional selection period up to the point where the R/D and CRA are signed are limited to a maximum of 6.5 million yen (including indirect expenses). Please see page 41 of the Public Invitation Guideline for details of activities to be carried out during the interim period. Expenses for each of the Years 1-5 should be about 35 million yen (including indirect expenses). Expenses for each fiscal year may be slightly adjusted according to the research plan, provided, however, that the total expenses, including expenses for the provisional selection period, must not exceed 175 million yen for a 5-year project, 140 million yen for a 4-year project, or 105 million yen for a 3-year project (including indirect expenses). Actual contract research expenses will be determined after selection, by means of screening and approval by a senior scientist of the research plan submitted by the principal investigator.

*2 In principle, indirect expenses equivalent to 30% of direct expenses may be included in the contract research expenses. When including indirect expenses, calculate as Indirect expenses = Direct expenses x 0.3.

* The maximum personnel costs for the principal investigator (PI) that can be disbursed from direct costs is the yearly salary of the person responsible for the study multiplied by the effort allocated to this project. During interim periods, the maximum amount that can be disbursed is 10% of the direct costs of the fiscal year concerned. For details of this system, see page 43, 44 of the Public Invitation Guidelines.

* There is no upper limit for the disbursement from direct costs of costs entailed in covering tasks other

than those of research (buyout costs). During interim periods, however, the upper limit for disbursement is 20% of the direct costs of the fiscal year concerned. For details of this system, see page 43, 44 of the Public Invitation Guidelines.

* Employment risks: When making employment decisions during the provisional selection period, be aware of the risk that the R/D may not be signed, and the project may not go ahead. Ensure that any employees appointed during that period are also aware of the risk.
* Give expenses as amounts including Japanese consumption tax.

2. JST contract research expenses plan by group

●Principal investigator's institution

Principal investigator name (Affiliation/position): _____ _____ (__ University __ Research Dept.)

	Provisional selection period	Year 1 (FY2024)	Year 2 (FY2025)	Year 3 (FY2026)	Year 4 (FY2027)	Year 5 (FY2028)	Total (thousand yen)
Equipment							
Materials/Consumables							
Travel							
Personnel and services							
Other							
Subtotal: Direct expenses (thousand yen)							
Indirect expenses (thousand yen)							
Total (thousand yen)							

●Joint research institution

Name of lead joint researcher (Affiliation/position): _____ _____ (__ University __ Research Dept.)

	Provisional selection period	Year 1 (FY2024)	Year 2 (FY2025)	Year 3 (FY2026)	Year 4 (FY2027)	Year 5 (FY2028)	Total (thousand yen)
Equipment							
Materials/Consumables							
Travel							
Personnel and services							
Other							
Subtotal: Direct expenses (thousand yen)							
Indirect expenses (thousand yen)							

Total (thousand yen)							

* During the provisional selection period, only the principal investigator's group is counted. During the interim period, the JST will conclude a Contract Research Agreement with the principal investigator's institution alone. Please see page 41 for details of activities to be conducted during the interim period.

Note: Please add tables according to the number of joint research institutions scheduled to conclude Contract Research Agreements with the JST after the first year. If a single research institution will conclude multiple Contract Research Agreements with the JST, please create tables according to the number of contracts.

3. Research cost plan to be actioned by the partner country research institution (anticipated)

		Year 1	Year 2	Year 3	Year 4	Year 5	Total (Local currency and Yen equivalent)
Costs covered by partner country side (Budget which can be devoted to the research in question by the partner country institution.)	Equipment						
	Materials/ Consumables						
	Travel						
	Personnel and services						
	Other						
	Total						

		Year 1	Year 2	Year 3	Year 4	Year 5	Total
ODA project expenses (Costs which cannot be covered by the partner country and will be submitted to JICA for funding application.)							Local currency Yen equivalent _____,000 yen (Maximum 300million yen in 5 years (without indirect costs))

- Describe in as much detail as possible the financial situation of the partner country after consulting with the research institution in the partner country.
- When conducting joint research with multiple countries, add extra rows to the table for the additional information.

- ODA cannot cover all the costs for the developing country side. In order to encourage self-reliant and sustainable economic growth, the developing country is expected to bear a portion of the costs. Consequently, costs such as the partner country side's labor costs, office rental in the partner country, consumables and the costs of operating and maintaining provided machinery and equipment in the partner country, and travel by partner country researchers within the partner country are in principle borne by the partner country side. This point applies equally to the SATREPS program, so the whole of the amount required above will not be provided as ODA. JICA's D/D study includes discussion of an appropriate level of costs to be borne by the partner country side, including costs for securing research locations in the partner country, and personnel costs for the partner country side researchers. Please understand that the budget for ODA project expenses (=Costs which cannot be covered by the partner country and will be submitted to JICA for funding application.) will only be fixed after the D/D study.

Form 7: Written Approval from Institution Director

Date: _____

Written Approval

To:
Japan Science and Technology Agency
Japan International Cooperation Agency

I hereby declare that if the underwritten research project proposed for the SATREPS (Science and Technology Research Partnership for Sustainable Development) program is selected, this institution will carry out the international joint research as set out below.

(Principal investigator's institution)
Director (name, title): _____
_____
Institution: _____ _____
(Official Seal*):
*may be omitted

Research project

Research project title: _____
Principal investigator: _____

Support to be provided

- Support for the exchange of documents agreeing to the implementation of international joint research with the counterpart institution
- Commitment to sign and comply with the Agreement (Agreement Regarding the Implementation of Technical Cooperation Under the Framework of SATREPS) and execute the Project Contract with JICA, and to administer expenses
- Compliance with the responsibilities of the principal investigator's institution in the case of a joint research framework being constructed
- Compliance with all laws and regulations related to international joint research, such as those governing security export control and use of genetic resources
- Provision of systems for clarifying responsibility and safety management in relation to the international dispatch of students and graduate students as part of efforts to train young researchers
- Support for other procedures, etc., required in order to conduct international joint research
- Establishment of a research framework which enables the principal investigator to be engaged in the proposed international joint research project from beginning to end. (Also respond to the question etc. below)

Is the principal investigator expected to reach retirement age (or complete his or her term of employment) during the duration of the project?	If the answer to this question is YES, please describe how your institution will ensure the continuity of the research implementation structure. However, the Principal Investigator may not be replaced.
(YES / NO)	

Form 8: Plans by Private-Sector Corporations, etc.
(If no private-sector company will take part as a joint research institution on the Japanese side, please leave out this form.)

Date: _____

Corporate initiatives concerning application of outcomes

To:
Japan Science and Technology Agency
Japan International Cooperation Agency

I hereby declare that if the underwritten research project proposed for the SATREPS (Science and Technology Research Partnership for Sustainable Development) program is selected, =*Name of the company*= will cooperate with the principal investigator and other related parties to implement the following initiatives in accordance with the research plan formulated by the principal investigator.

Company official of participating business (having responsibility concerning the content of this document):
Signature: _____
Name: _____
Company: _____
Position/title: _____
(Official Seal*):
*may be omitted

Research project
Research project title: _____
Principal investigator: _____

In the case that the company in question will participate in research and development, complete I; in the that the company in question will participate in practical application, complete II; in the case that the company in question will participate in both of the above phases, complete both I and II. Please provide as many details as possible.

I. Overview of Research and Development
(1) Method (Including specific timetable and funding plan)
(2) Benefits of cooperation
(3) Development risks
(4) Post-research utilization of developed technology, etc.

II. Practical Application
(1) Method (Including specific timetable and funding plan)
(2) Impact on other countries, including the partner country and Japan
(3) Risks pertaining to commercialization/practical application, etc.

- In response to each of the following questions, circle either YES or NO.
- Note that selection of a project is not conditional on a YES response to all questions. Details of the proposal and the coordination status are considered together when making selection decisions.

Status of coordination with joint researchers in Japan

1	Have you confirmed that each joint researcher understands that unlike regular competitive funding schemes, capacity development of the partner country institution through joint research is included in the SATREPS program because the project is linked with ODA?	YES NO
2	Form 2 of the research proposal documents is limited to a maximum of 12 A4 pages. To ensure impartiality, forms exceeding 12 pages will be considered non-compliant. Is your Form 2 within the 12-page limit?	YES NO

Status of coordination with affiliated institution

3	The SATREPS program involves responsibilities not required for ordinary competitive funding schemes, such as requiring an agreement for the implementation of joint research to be signed with the partner country institution, an Agreement and project contract for the technical cooperation project to be signed with JICA, and the use of appropriate ODA cost accounting. Have you held discussions with the institution you are affiliated with, including discussion of this point, and obtained a Written Approval from Institution Director (Form 7)?	YES NO
4	Because the SATREPS program combines ODA and a competitive funding program, a variety of administrative tasks will arise that are not part of ordinary competitive funding programs. Are you fully aware that this will result in considerable work for not only researchers but also the administrative contact?	YES NO

Status of coordination with principal investigator's other work

5	Under the SATREPS program, the principal investigator is required to provide more management than ordinary competitive funding schemes, and to commit to the necessary effort. In particular, the principal investigator needs to spend time liaising between Japan and the partner country in the period leading up to the signing of the R/D. Based on that point, have you investigated whether you can arrange to devote the necessary effort when the project is selected?	YES NO

Management of conflicts of interest by the principal researcher

6	Do the joint research institutions include any institutions that have a relationship with the principal investigator? Explanation: Please see Section 2.9.3 (2) (Managing COI of the principal investigator) on page 36 concerning institutions that have a relationship with the principal investigator.	YES NO
7	If you answered "Yes" to 6, please give the name of the joint research institution(s) concerned. ( )	
8	Do the joint research institutions include companies in which the JST is an investor? Explanation: Please see this webpage (https://www.jst.go.jp/entre/result.html#M01) concerning companies in which the JST is an investor. Companies for which this investment has finished are not subject to COI management, and need not be declared.	YES NO
9	If you answered "Yes" to 6, please give the name of the company(s) concerned. ( )	

Status of coordination with overseas diplomatic missions

10	In applying for the SATREPS program, have you exchanged information sufficiently with overseas diplomatic missions and JICA local offices as part of the process of	YES NO

	examining the details of your proposal?	

Security measures

11	Are you checking the security situation and travel information for the partner country and domestic locations where research will be conducted? Explanation: Projects cannot be implemented in areas where it is judged difficult to ensure the security of people involved in the project. Access the MOFA website (https://www.anzen.mofa.go.jp/) and other sources of information to check foreign travel and security information etc. The Japanese members of the adopted project will engage in research activities in the partner country in compliance with the security measures set forth by JICA.	YES NO

Counterpart institution implementation structure, etc.

12	Have you reached agreement with the partner country principal research institution concerning the research activities and how the research will actually progress? Does the institute have a sufficient understanding of the SATREPS system? In particular, does the institute understand that ODA assistance will be conducted through the framework of technical cooperation projects, and that it does not constitute a provision of funds to the research institute of the partner country? Explanation: Lack of sufficient agreement in advance has a substantial influence on subsequent progress. In some cases, a difference of expectations between the parties can make it difficult to proceed with the research.	YES NO
13	Is the counterpart's principal investigator a principal researcher with the ability to unify the partner country implementation structure, including the various institutions involved in the project? Also, does the research institution have an adequate support structure? Explanation: Under SATREPS, which is a program for joint research between institutions in Japan and in developing countries, the partner country's principal investigator, in addition to personally having research abilities, must have the ability to unify the whole of the counterpart's implementation structure, and must also receive sufficient support from affiliated institutions. This is a key factor in the smooth implementation of the project.	YES NO
14	Is the research staff sufficient (in terms of both abilities and numbers) for conducting joint research? Explanation: To conduct joint research effectively, it is important that the counterpart institution allocates a sufficient number of capable research staff members. Having an inadequate staff may adversely affect the progress of the project, or may result in the research being over-reliant on the Japan side, making it difficult to promote capacity development at the counterpart institution.	YES NO
15	Has sufficient budget been acquired for the joint research? Does the partner country understand that there are expenses to be borne by the partner country? Explanation: Under the SATREPS system, as an ODA project, the partner country is required to bear an appropriate amount of expenses to encourage self-reliant development. For this reason, the counterpart side must acquire a budget to cover its expenses. To ensure this, it is important to obtain the understanding of the overseeing agency involved in budgeting. If you do not already have experience of joint research with the partner country, particular attention must be paid to whether a budget has been acquired.	YES NO
16	Has the infrastructure (facilities/machinery and equipment) needed for implementing joint research been put in place at the partner country principal research institution? Explanation: Provision of the required facilities and space for the joint research is in principle the responsibility of the partner country. Providing the counterpart institution with facilities and machinery and equipment is not one of the aims of the SATREPS project. If there are problems with the current infrastructure, it is necessary to check whether sufficient maintenance will be possible after the project finishes.	YES NO
17	Have you confirmed coordination with and allocation of functions between the counterpart institution's overseeing agency and the other government agencies involved? Additionally, is the application of outcomes being considered based on the policies and intentions of the partner country's government agencies and private sector, as well as the partner country's research institute? Explanation: The participation of the supervising agency, the other government agencies involved, and the private sector is important for ensuring the acquisition of budget resources for the smooth implementation of the SATREPS project and in ensuring the application of research outcomes. Furthermore, it is necessary to ensure a clear definition of functions in advance. The supervising agency and other agencies are also involved in the SATREPS application procedure handled by the partner	YES NO

	country, so, in addition to the details of the joint research proposal, it is important to explain and obtain sufficient understanding of the costs that need to be borne by the partner country.	

Provision of machinery and equipment

18	Does the principal investigator's research institution of affiliation possess the systems required to assume responsibility for purchasing, shipping, and installing the machinery and equipment provided, in line with security export control policy? Explanation: As provision of machinery and equipment requires that all processes from purchase, shipping, and installation be conducted in line with laws and regulations by the principal investigator's research institution of affiliation, please confirm beforehand that the institution in question possesses the necessary systems for handling the export of machinery and equipment.	YES NO
19	Are you taking account of points requiring special attention when the machinery and equipment to be supplied includes specialist machinery and equipment and plant constructed to order? Explanation: It is envisioned that general procurement of machinery and equipment via JICA will be unable to handle specialist machinery and equipment and plant constructed to order. Consequently it is necessary to check in advance that the Japan-side principal investigator's institution has the ability to handle the procurement procedures and the necessary construction and maintenance.	YES NO N/A
20	Does the plan for provision of machinery and equipment take account of the setup for handling and maintenance of the machinery and equipment after the project finishes? Explanation: After the SATREPS project finishes, the machinery and equipment provided by Japan are to be used for further research activities, etc., with the partner country becoming responsible for the costs of maintaining the machinery and equipment provided by Japan. Consequently, the introduction of machinery and equipment that exceed the partner country's maintenance capabilities is considered inappropriate, even if the machinery and equipment are essential for the research. Also, machinery and equipment provided by ODA is provided on the assumption that the machinery and equipment will continue to be used after the project finishes for the lifetime of the machinery and equipment, so the system does not cover machinery and equipment that will not be used on an ongoing basis in the partner country, or will only be used for purposes such as gathering data for research.	YES NO

Development or improvement of facilities

21	Are you taking account of points requiring special attention when the development or improvement of facilities is included? Explanation: The development or improvement of facilities will require, for example, securing land for building the facilities, legal and contractual procedures pertaining to design and construction, safety management for handling hazardous materials, maintenance and management systems, and securing of funding. Please give adequate consideration to these points with the implementing agency of the counterpart country, and include in the plan only those that are essential for project implementation, can be completed within the project period, and can be maintained and managed without any problems following the termination of the project. The development or improvement of facilities that do not meet these requirements will not be permitted. In addition, if during project implementation it becomes clear that the development or improvement of facilities is unlikely to be completed within the project period, you will need to review your plan for the development or improvement of facilities.	YES NO N/A

Application of outcomes

22	Has a clear plan been produced for application of outcomes? Explanation: One of the major characteristics of SATREPS is that the outcomes of joint research are not only used for research. The outcomes are applied to benefit society. Even from an ODA perspective, it is important to have a practical and realistic plan for application of outcomes, not just a hypothetical plan.	YES NO
23	In order to prepare for application of outcomes, does the implementation structure include the participation of related institutions or entities such as private sector businesses? Explanation: The SATREPS joint research period lasts a maximum of 5 years. In order to achieve the application of outcomes to a certain extent, it is important to have private sector businesses and other entities that will handle the application of outcomes section of the project actually participate from the idea stage, and prepare for implementation in a planned manner.	YES NO

Other Japanese projects in the same field

24	Have you confirmed whether any other Japanese aid projects (JICA projects, etc.) have been implemented or are being implemented in the same field? Explanation: If the partner country principal research institution for the current project has acted as the	YES NO

	counterpart (C/P) for other aid projects in a related field in the past, then from the perspective of making effective use of ODA, consider research plans that build on that past experience as far as possible. If there are related ODA aid projects such as JICA technical cooperation projects currently in progress (or scheduled to be implemented soon), confirm that there is no duplication of content between such projects and the proposed SATREPS project. In particular, if the counterpart institution is the same institution, there is a risk of the new project impacting the implementation structure of the existing project. Take this into account, and if circumstances warrant, consider adjusting the timing or content of the proposal.	

Projects backed by other donors in the same field

25	Have you confirmed whether any other aid projects have been implemented or are being implemented in the same field but backed by other donors? Explanation: Confirm whether there is any duplication, and how the project is scheduled to proceed. In particular, if the counterpart institution is the same institution, make sure to question the donor's representatives and the counterpart institution sufficiently to confirm the likely extent of the resulting impact if the proposed joint research is implemented.	YES NO

Contribution to SDGs

26	Which of the 17 United Nations Sustainable Development Goals (SDGs) does your proposal contribute to the most in your opinion? Please write up to 3 goal numbers in the right column. Write the goal number that contributes the most in the upper row. (Reference: https://www.mofa.go.jp/mofaj/files/000101402.pdf)		