

FY2013

**Science and Technology Research Partnership
for Sustainable Development (SATREPS)
International Collaborative Research Program**

Invitation for Application of Research Proposals

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.

Application Guideline (Provisional Translation)



**Japan Science and Technology Agency (JST)
Research Partnership for Sustainable Development Division
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I. Project Outline

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 future utilization of research outcomes^{*2}. Implemented through collaboration with Official Development Assistance (ODA), the aim of the program is to acquire new knowledge leading to resolving global issues and advancing science and technology. 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.

*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 technology and knowledge to enhance government services or to develop products that can be deployed in the market.

2. General description of the research program

(1) Program status and aims

In August 2011, the Japanese Cabinet approved the Fourth Science and Technology Basic Plan, which includes Japan's aims regarding its role in dealing with global issues. It states how the country will take a leading role in working to resolve critical issues occurring on a global scale, including global warming, large-scale natural disasters, and emerging and re-emerging infectious diseases. Specifically, Japan will form partnerships with and cooperate with universities, public research institutions, business, and also with foreign and international organizations to work on research and development to find solutions to global issues. In addition, it needs to encourage the deployment of the research outcomes in Japan and in other areas around the world, and take a lead in securing the agreement of the international community. At the same time as tackling global issues, in order to support self-reliant, sustainable development in developing countries in areas such as Asia and Africa, Japan needs to provide assistance in terms of applying and transferring technology from Japan, and there needs to be collaboration between universities and research institutions in Japan and such developing countries, conducting joint research with the aim of developing and utilizing new technologies, and gaining new knowledge, which will also improve overall capabilities at universities and research institutions in the collaborating country and raise science and technology standards in both countries.

The Fourth Basic Plan states that in order to overcome the serious issues facing Japan or the whole world, the government should promote R&D and other activities comprehensively and systematically with the participation of various organizations in industry, academia and government through a cross-sectional approach and by coordinating activities developed by each of these organizations, including basic research, application, development, industrialization, and commercialization, so that such efforts lead to new value creation.

Implementation of the government's basic plan is strongly promoting career development, and training personnel to ensure the availability of human resources capable of working in a range of fields both in Japan and overseas, of playing a front-line role in the world, and of leading the next generation. Japan states in the plan that it will step up initiatives that will enable the leaders of the next generation to launch themselves into the world of science and technology innovation full of dreams and hopes for the future. Through international collaborative research, Japan is also able to develop its own human resources for dealing with globalization.

Furthermore, in the "Rebirth of Japan" policy document agreed by cabinet decision in July 2012, Japan set out a strategy for enhancing systems for promoting science and technology innovation, and for promoting international involvement and collaboration between industry, academia, and the government. The objective is to integrate the knowledge and expertise of these three sectors in order to promote R&D and to feed R&D outcomes back to society. It also aims for the creation of new growth industries using

approaches such as green innovation and life innovation to find solutions for the challenges that Japan faces. At the same time, the policy places expectations on demonstrating a new growth and international contribution model that could address global challenges while linking strategically with ODA, as a means of strengthening Japan's presence worldwide.

The FY2013 invitation for research proposals seeks projects that reflect these policies while meeting the aims of the SATREPS program.

(2) 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 acquire new knowledge that can lead to the resolution of global issues and the advancement of science and technology. Under this program, JST provides support for research expenses in Japan and elsewhere (but not in the partner country), while JICA bears the costs*3 in the partner country, which is the recipient country under the ODA technical cooperation framework. Management of the research and development (R&D) for international joint research as a whole is conducted cooperatively between JICA (which operates technical cooperation projects in developing countries) and JST (which possesses expertise in funding research projects in Japan). 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 related to 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 center facilities and the development of human resources through joint research activities will make it possible to develop self-reliant, sustainable research systems.

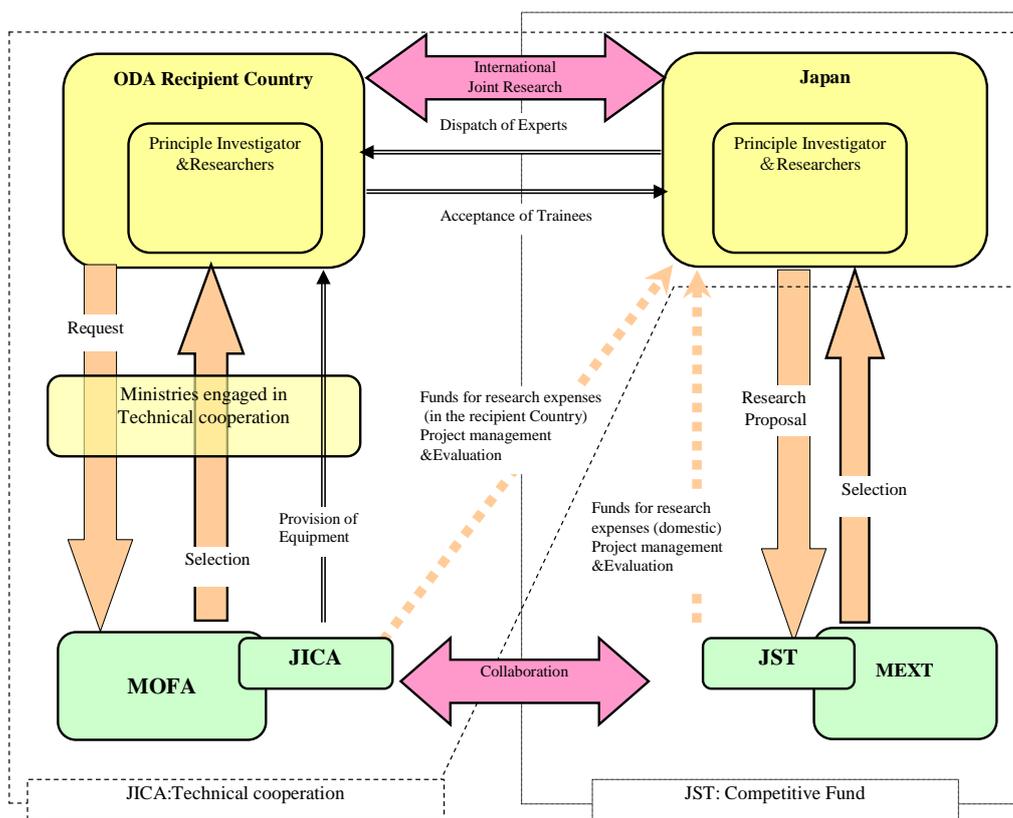


Figure 1 SATREPS Program Structure

*3 As JICA provides support under the technical cooperation framework, the ODA recipient country is required to depend on its own efforts in the provision of research facilities and equipment, allocation of counterparts, bearing of local costs, obtaining permission for field surveys from relevant organizations, etc. Especially, the local costs required for a project (labor costs, rent, consumables, operation and maintenance

of equipment provided, transportation fees, and other miscellaneous costs) should normally be covered by that country. Existing facilities, equipment and materials should be utilized as much as possible. The investment by Japan under the framework (dispatching experts, providing equipment, inviting researchers from the partner country to Japan, dispatching survey teams, and etc.) should be determined after the ex-ante evaluation conducted by JICA.

(3) SATREPS program main flow

a) Setting research areas, and inviting proposals and applications

The Japanese government (the Ministry of Education, Culture, Sports, Science and Technology, or MEXT) 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 a program officer (PO) with responsibility for a single research area of their expertise. JST also determines more specific research areas within the research fields.

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, the Ministry of Foreign Affairs (MOFA) receives requests 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 PI 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 be submitted by the research institution in the recipient country to MOFA by the specified deadline*4, via the ministry or agency in the recipient country responsible for ODA technical cooperation.

*4 Please be aware that the deadline for requests for ODA technical cooperation to the Japanese government may vary from country to country.

b) 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 PI and one for ODA technical cooperation, have to be approved in order for the research project to be supported under the program. MOFA shall notify the prospective recipient country of this decision. (See Figure 2.)

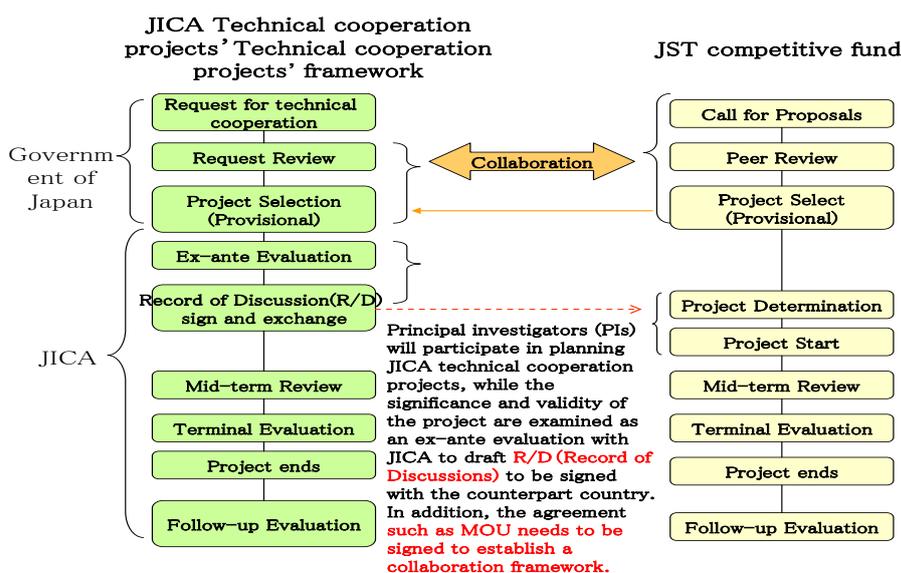


Figure 2. SATREPS program flow

c) 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 Memorandum of Understanding (MOU) or similar document about the joint research, of which details shall match the R/D and JST's Commitment Research Agreement, must also be signed between the research institutions (parties concerned). Because of this requirement, after receiving conditional approval, the PI and other researchers are requested to work towards the prompt signing of these documents.

After giving notification that a research project has been conditionally approved, JST firstly concludes a Provisional Research Expenses Contract with the research institution to which the PI in Japan belongs. 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 PI in Japan and other members, to the prospective recipient country. The investigation team performs a detailed investigation into the planning of the research project 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 can take a long time, and may not even be completed before the end of the year in which the project would be implemented (the end of FY2013). Even if a research project has been selected, it may not be possible for the research to be implemented if the R/D is not likely to be signed in the near future, or for other reasons^{*5}. Preparations for implementing the project may also be halted part way through. 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.

*5 Such reasons may include natural disasters, deterioration of security, decisions made by the government of the prospective recipient, improper use of research funds, and improper research activities.

d) Implementation of the international joint research

In order to implement the international joint research as a formal SATREPS project, the PI and other researchers shall act in accordance with a contract (Commitment Research Agreement) signed with JST and contracts signed with JICA (Agreement^{*6} and Operating Contract). The PI shall be responsible for the research project and for coordinating the running and management of the project as a whole. It is not essential for the Japanese PI to be permanently stationed in the partner country for the period of the joint research, but to ensure that the research proceeds smoothly, it is desirable that at least one member of the Japanese research team be stationed there as a research fellow as permanently as possible^{*7,*8}.

*6 The Agreement (Agreement for Technical Cooperation with JICA under SATREPS) is a comprehensive document stipulating the rights and obligations of JICA and the research institution to which the PI belongs. JICA and the research institute to which the PI belongs shall conclude the Agreement when the R/D for the institute's first project is signed. In addition, JICA and the research institute to which the PI belongs shall clarify the expenses that JICA will bear, and shall sign a Operating Contract containing an estimate of these expenses and details of accounting procedures, for reference by either party.

*7 The research fellows being stationed in the developing country do not necessarily have to be PIs. Other members of the Japanese research team necessary for the joint development are eligible. However, postgraduate and other students are not eligible to be stationed as JICA experts.

Please note that even if the PI remains in Japan while other research team members are stationed in the developing country, the PI is still the team leader for the project and shall be responsible for the activities carried out in that country for the JICA technical cooperation project.

*8 In technical cooperation projects, JICA recruits project coordinators through a transparent recruiting process and stations them in the ODA recipient country to provide support to experts and manage local operating expenses or to support procurement of equipment by the local JICA office. JICA similarly stations local project coordinators for SATREPS projects. Such staff cannot simultaneously participate in research work.

e) Human resource development

- Human resource development through the Japanese Government (MEXT) Scholarship Program

From FY 2010, MEXT established a "Global-Issue Section" within Japanese government scholarship program (University Recommendation) for SATREPS projects. The aim of the Global-Issue Section is to develop young researchers with the potential to be future key players in relevant research in their own countries by taking a doctorate at Japanese institution. Invitation for this Japanese government scholarship program is implemented by MEXT, and scholarship is budgeted separately from SATREPS. To be eligible for this program, a doctoral degree needs to be received within the term of the SATREPS project. For more details, please refer to the Japanese Government (MEXT) Scholarship Program website. Please note that the availability of this scholarship program can be altered depending on the final budget.

Japanese Government (MEXT/Monbukagakusho) Scholarship Program website

http://www.mext.go.jp/a_menu/koutou/ryugaku/06032818.htm

<http://www.studyjapan.go.jp/en/toj/toj0302e.html>

- Inviting foreign researchers to Japan

There is also a system for inviting researchers from the ODA recipient country to Japan using the ODA budget. In this system, 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 invitations to Japan under this system are normally conditional on the researcher's period of research in Japan terminating within the period for joint research specified in the R/D.

- Helping young post-doctoral researchers to secure varied career paths

When a proposal is selected as a SATREPS project, if young post-doctoral researchers are employed to participate in the project using public funds (competitive funding and other project research funding, education and research funding through open funding schemes for universities), there is a requirement to provide active assistance to such researchers to help them to secure varied career paths. This requirement is based on a policy document issued on December 20, 2011 by the Council for Science and Technology's Committee on Human Resources concerning basic policy for securing varied career paths for young post-doctoral researchers employed using public funds from MEXT (Japanese language: http://www.mext.go.jp/b_menu/shingi/gijyutu/gijyutu10/toushin/1317945.htm).

It is desirable that the effective use of all of these programs will have a synergistic effect, in terms of developing the skills of key personnel and young researchers promoting research in the developing country and enhancing systems for sustainable international joint research with Japan.

<Reference: Major policy documents concerning science & technology>

Task Force Report on Science and Technology Diplomacy (February 2010, Council for Science and Technology Policy; in Japanese)

<http://www8.cao.go.jp/cstp/sonota/kagigaiko/8kai/siryoy1-1.pdf>

The 4th Science and Technology Basic Plan (August 19, 2011, Cabinet decision; in Japanese)

<http://www8.cao.go.jp/cstp/kihonkeikaku/4honbun.pdf>

Policy for the Allocation of Resources, Including the Science and Technology Budget (July 30, 2012, Council for Science and Technology Policy; in Japanese)

<http://www8.cao.go.jp/cstp/budget/houshin.html>

FY2013 Action Plan for the Implementation of Important Science and Technology Policy Measures (July 19, 2012, Minister of State for Science and Technology Policy, Diet members with special knowledge of the Council for Science and Technology Policy; in Japanese)

http://www8.cao.go.jp/cstp/budget/h25ap/h25ap_honbun.pdf

Basic Plan for Space Policy (June 2, 2009, Strategic Headquarters for Space Policy)

http://www.kantei.go.jp/jp/singi/utyuu/basic_plan.pdf

II. Guidance for Application and the Project Selection Process

1. Research areas

Research proposals are currently invited in the following five research areas under four research fields.

Research fields (number of research areas)	Cooperation request from developing country	Number of proposals to be selected	Research period	Research budget from JST
Environment and Energy (2 research areas)	Compulsory	About 15 in total	3 to 5 years	Approx. ¥36M/year (including indirect costs) (Approx. ¥180 M in total for a 5-year project)
Bioresources (1 research area)				
Natural Disaster Prevention (1 research area)				
Infectious Diseases Control (1 research area)				

The number of proposals to be selected and the research budget from JST are tentative, and may change due to budgetary considerations.

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.

Applications start date	Wednesday September 26, 2012
Applications deadline (Deadline for ODA applications to reach MOFA is the same) ^{*9}	12:00 noon (Japan time) on Tuesday November 13, 2012 (applications received after the deadline will not be accepted)
Document screening	Early December 2012 to late February 2013
Notification of document screening results	February 2013 (approx.)
Interviewing for selection	March 2013 (approx.)
Conditional approval and notification	Late April 2013
Start of research	June 2013 or later, following signing of the R/D ^{*10}

^{*9} 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.

^{*10} Around the same time as the 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 at an appropriate time after notifying the PI of conditional approval.

3. Countries covered by the program

Please refer to the following Table 1 for the countries that are eligible to request ODA.

No.	Region	Name of Country	No.	Region	Name of Country	No.	Region	Name of Country
1		Republic of Azerbaijan	39		Republic of Angola	84		Argentine Republic
2		Republic of Armenia	40		Republic of Uganda	85		Antigua and Barbuda
3		India	41		Federal Democratic Republic of Ethiopia	86		Oriental Republic of Uruguay
4		Republic of Indonesia	42		State of Eritrea	87		Republic of Ecuador
5		Republic of Uzbekistan	43		Republic of Ghana	88		Republic of El Salvador
6		Republic of Kazakhstan	44		Republic of Cape Verde	89		Republic of Guyana
7		Kingdom of Cambodia	45		Gabonese Republic	90		Republic of Cuba
8		Kyrgyz Republic	46		Republic of Cameroon	91		Republic of Guatemala
9		Georgia	47		Republic of The Gambia	92	L	Grenada
10		Democratic Socialist Republic of Sri Lanka	48		Republic of The Guinea	93	a	Republic of Costa Rica
11	A	Kingdom of Thailand	49		Republic of Guinea-Bissau	94	t	Republic of Colombia
12	s	Republic of Tajikistan	50		Republic of Cote d'Ivoire	95	i	Jamaica
13	i	Turkmenistan	51		Union of Comoros	96	n	Republic of Suriname
14	a	Nepal	52		Republic of Congo	97		Saint Christopher and Nevis
15		Islamic Republic of Pakistan	53		Democratic Republic of the Congo	98	A	Saint Vincent and the Grenadines
16		People's Republic of Bangladesh	54		Democratic Republic of Sao Tome and Principe	99	m	Saint Lucia
17		The Democratic Republic of Timor-Leste	55		Republic of Zambia	100	e	Republic of Chile
18		Republic of the Philippines	56		Republic of Sierra Leone	101	r	Commonwealth of Dominica
19		Kingdom of Bhutan	57		Republic of Djibouti	102	i	Dominican Republic
20		Socialist Republic of Viet Nam	58	A	Republic of Zimbabwe	103	c	Republic of Nicaragua
21		Malaysia	59	f	The Republic of the Sudan	104	a	Republic of Haiti
22		Union of Myanmar	60		Kingdom of Swaziland	105		Republic of Panama
23		Republic of Maldives	61		Republic of Seychelles	106		Republic of Paraguay
24		Mongolia	62		Republic of Equatorial Guinea	107		Federative Republic of Brazil
25		Lao People's Democratic Republic	63		Republic of Senegal	108		Bolivarian Republic of Venezuela
26	M	Islamic Republic of Afghanistan	64		United Republic of Tanzania	109		Belize
27	i	People's Democratic Republic of Algeria	65		Republic of Chad	110		Republic of Peru
28	d	Republic of Yemen	66		Central African Republic	111		Republic of Bolivia
29	r	Republic of Iraq	67		Republic of Togo	112		Republic of Honduras
30	e	Islamic Republic of Iran	68		Federal Republic of Nigeria	113		United Mexican States
31		Arab Republic of Egypt	69		Republic of Namibia	114	E	Republic of Albania
32		Republic of Tunisia	70		Republic of Niger	115	u	Ukraine
33		Republic of Turkey	71		Burkina Faso	116	r	Republic of Kosovo
34	E	Palestine Liberation Organization	72		Republic of Burundi	117	o	Republic of Serbia
35	a	Kingdom of Morocco	73		Republic of Benin	118	p	Bosnia and Herzegovina
36	s	Hashemite Kingdom of Jordan	74		Republic of Botswana	119	e	Former Yugoslav Republic of Macedonia
37	t	The Libyan Republic	75		Republic of Malawi	120		Republic of Moldova
38		Republic of Lebanon	76		Republic of South Africa	121		Montenegro
			77		Republic of South Sudan	122		Republic of Kiribati
			78		Republic of Mauritius	123		Cook Islands
			79		Islamic Republic of Mauritania	124		Independent State of Samoa
			80		Republic of Mozambique	125	P	Solomon Islands
			81		Republic of Liberia	126	a	Tuvalu
			82		Republic of Rwanda	127	c	Kingdom of Tonga
			83		Kingdom of Lesotho	128	i	Republic of Nauru
						129	f	Niue
						130	i	Republic of Vanuatu
						131	c	Independent State of Papua New Guinea
						132		Republic of Palau
						133		Republic of the Fiji Islands
						134		Republic of the Marshall Islands
						135		Federated States of Micronesia

Table1. List of Countries Eligible to partner in SATREPS

4. How to apply

Forms for research proposals for FY2013 shall be downloaded from the Electronic System for Research and Development (e-Rad), filled in, and then submitted using e-Rad. Refer to the guidelines for the target outcomes sheet (成果目標シート) of Form 2 and to the e-Rad manual posted on the following websites. (additional information for the use of researchers submitting SATREPS proposals).

<http://www.jst.go.jp/global/english/koubo.html> (with limited information)

<http://www.jst.go.jp/global/koubo.html> (with complete information)

When research applications are made, the PI and all other planned members of the research team in both countries are asked to sign up for "Friends of SATREPS", the program's social networking service (SNS) site. Registered members are requested to then build communities for the research projects to be proposed. When creating communities, go to Community Category and select "H:FY2013 SATREPS Application." The access limitation for topics can be set as you see fit (e.g. if you wish to advertise the proposal externally, "Accessible to all members" should be selected, whereas if you do not wish to disclose the details of the proposal externally, "Accessible to only community members" should be selected).

Friends of SATREPS: members-only social networking site

<https://fos.jst.go.jp/>

SATREPS also has a fan page on Facebook.

<http://www.facebook.com/Friends.of.SATREPS>

5. Research fields and areas in which proposals are invited

A PI applicant can file only one research proposal per FY for this program across all the research areas outlined below.

List of research fields and areas to be invited is as follows.

Research Fields	Research Areas
Environment and Energy	1. Research contributing to the resolution of global-scale environmental issues
	2. Research contributing to energy systems for low carbon society
Bioresources	3. Research contributing to sustainable utilization of bioresources
Natural Disaster Prevention	4. Research on natural disaster prevention and mitigation measures attuned to the needs of developing countries
Infectious Diseases Control	5. Research on measures to address infectious diseases control attuned to the needs of developing countries

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

For interdisciplinary research that extends over more than one area, it is possible to submit a proposal for an interdisciplinary project by selecting multiple fields or areas when filling out the research proposal (Form 1).

(1) Environment and Energy

Target for selection is the research projects in which there is a high degree of demand for implementation in developing countries and capacity building of researchers in those countries. Projects also ought to envisage their outcomes being applied to the benefit of society including the developing country, and being used towards the resolution of global issues. A project is not eligible if it consists merely of transfer of Japanese technology without entailing any joint research, and of simple operations that do not make any contribution to the advancement of science and technology.

Research Area 1: Research contributing to the resolution of global-scale environmental issues

The development of technologies and dissemination of research results are extremely important in solving global environment and energy issues caused by factors such as climate change, population increase, population overconcentration in large cities, overproduction, and overconsumption. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) points out that the climate

change can cause the severe adverse effects on water cycle, ecosystem, food production, health, etc. It indicates that, in order to achieve adaptation to and mitigation of climate change, governments should each set policies relating to the improvement of energy supply, transportation, building construction, industry, and waste, with the aim of reducing greenhouse gas emissions.

It is not enough just to continue with current plans and efforts to mitigate climate change. In order to deal with climate change in the future, it is essential to take activities to a higher level. As it is predicted that the effects of climate change are likely to worsen over the long-term, it is clear from the situation now that mitigation measures will be insufficient in tackling climate change. It is necessary to implement a combination of adaptation and climate change mitigation plans in order to reduce climate change and the risks associated with it.

Based on these considerations, research proposals for FY2013 shall consider the social needs of developing countries, and include research that contributes to resolving global environmental issues, that links also to the advancement of science and technology in Japan. Several examples of research subjects are listed below, but other subjects are also acceptable if they meet the requirements mentioned above. For research proposals relating to energy systems for low carbon societies, including utilizing biomass and waste for energy, applications should be made under Research Area 2.

- Research on climate change adaptation or mitigation
- Research on water processing and ensuring safe water supply
- Research on safety controls for risks associated with chemical substances
- Research on establishing a recycling society (including resource recovery and reuse)
- Research on the preservation and restoration of ecosystems and biological diversity, including bioremediation
- Research on reconstruction and restoration of environments damaged by large-scale natural disasters
- Research on urban environmental conservation and environment creation

Research Area 2: Research contributing to energy systems for low carbon society

At the G8 L'Aquila Summit in July 2009, G8 nations recognized that they need to keep the average global temperatures from rising more than two degrees Celsius, and to achieve that, they need to undertake quantifiable actions to reach a global reduction of 50% in the greenhouse gas emissions, and leaders agreed on a long-term target of cutting their greenhouse gas emissions by 80% by 2050. Japan had already established its "Action Plan for Achieving a Low-Carbon Society" in July 2008 and is currently implementing measures toward creating a low-carbon society.

The promotion of measures to cut global greenhouse gas emissions requires not only the involvement of advanced nations, but also that of developing countries. Energy systems that contribute to the creation of a low-carbon society lead also to a reduction in the use of fossil fuels, so it is extremely beneficial for the countries concerned, as well as the whole world, to promote their development and to disseminate the results of such development.

Based on these considerations, research proposals for FY2013 shall be based on the needs of developing countries, covering subjects that can potentially enhance science and technology in Japan and bring significant scientific and technological benefits. Several examples of such topics are listed below. The list is for reference and is not exhaustive.

- Research relating to the utilization of natural energy and new energies, including utilizing biomass energy
- Research on basic technologies relating to the advanced utilization of energy, energy-saving, carbon dioxide capture and storage, systemization, and simulation, etc.
- Research contributing to the optimization and streamlining of energy systems (including smart communities) related to sectors such as industry, transportation, and residential/commercial in the developing country.

(2) Bioresources

Research Area 3: Research contributing to sustainable utilization of bioresources

Since ancient times, human beings have utilized a diversity of bioresources for food, medicine, fodder, textiles, and energy. With global-level population increases and climate changes, agricultural systems need to be capable of dealing with issues such as desertification, salt accumulation in agricultural land, the spread of diseases and pests, less reliable temperature and rainfall levels, etc., all of which threaten the sustainable production of bioresources. Establishing foundations for sustainable agricultural production is considered important. At the 10th Conference of Parties (COP10) to the Convention on Biological Diversity, held in Nagoya, Japan, in October 2010, the Nagoya-Kuala Lumpur Supplementary Protocol was adopted. Through the Protocol, international rules were established on genetic engineering and overall rules set on access to genetic resources and benefit-sharing (ABS) based on the Nagoya Protocol. This is a step towards establishing an international framework for the increasingly diverse utilization of bioresources.

So that we can continue to enjoy the benefits of bioresources despite globally changing conditions, more research and development into the production, utilization, and management of bioresources is called for and it is hoped that the outcomes of such research will enable us to make a much greater contribution back to society.

Applications are accepted for research projects covering fields in developing countries for which research is particularly necessary and for which skills development of researchers is required. Project proposals shall cover issues common to both the developing country and Japan so that collaboration can further enhance the development of both countries. The envisaged outcome of proposed research projects must be to benefit society through joint research, by working to resolve global issues in developing countries and elsewhere. Proposals for projects that consist merely of transferring technology and providing knowledge from Japan without any joint research, or that consist of simple operations that do not contribute to development shall not be accepted.

Based on these considerations, several examples are given below of the types of research project that may be accepted for FY2013. The list is for reference and is not exhaustive.

- Research contributing to the sustainable production of bioresources (including resource management, breeding and cultivation technology for plant, animal and marine bioresources)
- Research contributing to the utilization and evaluation of bioresources (including using biodiversity for developing drugs from natural substances, etc.)

Research topics focusing on the following issues are excluded:

- Research contributing to the conservation and restoration of bioecosystems 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, 2)

(3) Natural Disaster Prevention

Research Area 4: Research on natural disaster prevention and mitigation measures attuned to the needs of developing countries

Natural disasters in developing countries have many aspects in common with those experienced in Japan in the past. Japan is a leader in the field of natural disaster prevention, and there are many possibilities for application of the knowledge accumulated in Japan to date. For the purposes of natural disaster prevention in Japan, too, it is hoped that further advancements will be made in technology such as earthquake and tsunami early warning systems and high-precision weather forecasting. To achieve this, it will be important not only to gather observation data obtained in Japan and apply it to research and development here, but to also adopt an integrated and organized approach to advancing research and development within a broader global framework. The United Nations World Conference on Disaster Reduction held in January 2005 produced the "Hyogo Framework for Action", a world-wide strategy for natural disaster prevention for the

next ten years. This framework underlines the need for each country to engage in focused efforts toward natural disaster prevention, and the importance of providing technical assistance to developing countries.

The Great East Japan Earthquake of March 2011 caused extensive damage to Japan. In the “Basic Policy on Reconstruction Following the Great East Japan Earthquake” (first enacted in July 2011 by the Reconstruction Headquarters in response to the Great East Japan Earthquake), Japan states its intention to strongly promote international cooperation so that the knowledge it obtained and lessons it learned from the earthquake and restoration process can be used to international benefit. It also indicates that it will carry out detailed investigative research, including international joint research, on this major disaster, in order to help prevent the occurrence of natural disasters in the future. It is recommended that such research incorporate analyses to clarify the mechanisms of earthquakes and tsunami, a review of natural disaster prevention measures to date, and an investigation into risk communication processes, etc.

Applications are accepted for research projects covering fields in developing countries for which research is particularly necessary and for which skills development of researchers is required. Project proposals shall cover issues common to both the developing country and Japan so that, through collaboration, further advancements can be hoped for in science and technologies for preventing natural disasters. Specifically, eligible proposals shall relate to natural disasters such as earthquakes, tsunami, volcanic eruptions, and landslides, or to the prevention or reduction of disasters such as large-scale fires, chemical plant accidents, and water damage to underground space in highly populated cities.

The envisaged outcome of proposed research projects must benefit society through joint research, by working to resolve global issues in developing countries and elsewhere. Proposals for projects that consist merely of transferring technology and providing knowledge from Japan without any joint research, and whose contribution to natural disaster prevention is limited to only one of the countries involved shall not be accepted.

Based on these considerations, several examples are given below of the types of research project that may be accepted for FY2013. The list is for reference and is not exhaustive.

Research related to the clarification of natural disaster mechanisms through measurement of natural phenomena associated with earthquakes, tsunami, volcanic eruptions, landslides, etc.

Research and development for the collection, processing, effective provision and utilization of natural disaster related information (including research into IT utilization techniques)

Research and development relating to technology for measures to minimize damage caused by natural disasters such as earthquakes, tsunami, volcanic eruptions, floods, drought, and landslides

Research and development relating to technology for measures to minimize damage caused by large-scale disasters (inundation, fires, earthquakes, chemical plant accidents, etc.) in cities

(4) Infectious Diseases Control

Research Area 5: Research on measures to address infectious diseases control attuned to the needs of developing countries

HIV/AIDS, malaria, dengue fever, tuberculosis, highly-pathogenic avian influenza, and other emerging and re-emerging infectious diseases not only pose a threat to health in developing countries, but act as a major impediment to social and economic development. The frequency with which people and goods are now moving across national borders means that these problems are not confined to developing countries. By contributing to efforts to address infectious disease issues in developing countries, we can, in turn, play a part in protecting the health of individuals from Japan who reside in or travel to those countries, and in curbing the entry of infectious diseases into Japan. As a result, such efforts will improve worldwide hygiene. For these reasons, Japan needs to work in cooperation with developing countries on research to address infectious disease control on a global scale.

In light of these conditions, applications in FY2013 are invited for projects involving research on prevention, diagnosis and treatment, etc. of infectious diseases, implemented through joint research with research institutes in the developing country and thereby contributing to the enhancement of public health, science and technology in both the developing country and Japan. Applications must involve projects in which, founded on the conditions of and needs relating to infectious disease control in developing countries, result in the improvement of sanitary conditions and building capacities of researchers in those countries.

Proposed research projects must envisage outcomes of joint research being returned to society towards the resolution of global issues including those in the developing country. Projects that consist merely with

the transfer of Japanese technology without entailing any joint research, and simple operations that do not make any contribution to the advancement of science and technology will not be eligible.

Furthermore, regarding research proposals containing drug development and development of new treatment methods, note that clinical trials and medical practice are not eligible for joint research. For more information, please refer to the relevant JICA Policy.

Based on these considerations, several examples are given below of the types of research project that may be accepted for FY2013. The list is for reference and is not exhaustive.

- Research and development on Zoonosis such as avian influenza, swine influenza and others
- Research and development for technology related to diagnostics, vaccines and therapeutics for the detection and control of emerging and re-emerging infectious disease including HIV/AIDS, malaria, Dengue fever and tuberculosis

Examples described above shall not be understood to encourage the submission of proposals covering all aspects of diagnostics, vaccines and therapeutics. Rather, it is highly recommended to target the subject of proposals based on research results obtained so far, supported by existing cooperative activities and thereby expected to proceed with the smooth operation of joint activities.

As for proposals relating to the "Japan Initiative for Global Research Network on Infectious Diseases" by MEXT in FY2010, submit proposals based on the needs of developing countries, including future plans for utilizing research outcomes in society, with the aim of improving research capabilities and enhancing the public health of developing countries, rather than proposals which are merely an extension of research activities, that is, identical activities from aspects of objectives, target diseases, approaches and PIs of research at centers. Also, we expect proposals that include joint research at regional centers of neighboring countries.

6. Review criteria and considerations for the selection process

(1) Review criteria

The proposal must be based on the needs of the ODA recipient country, and be largely in line with Japan's ODA policy with regard to that country—ODA perspective.

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

The proposed project must envisage future utilization of research outcomes in society (This does not necessarily have to be achieved within the research period; however, the idea to return the outcomes expected in the research plan to society should be clearly defined, such as by outlining the direction for the partner country's future activities, or for deployment to other regions or markets)—Direction for utilization of research outcomes.

The project must have the potential to develop science and technology that could not be achieved by research in Japan alone, to train young Japanese researchers, to make effective use of Japan's science and technology in the developing country and globally, and to strengthen Japan's presence—Merits for Japan.

There must be a concrete plan for joint research with the developing country, a clear designation of the chief researcher in Japan and in the partner country, and of research institutes or other setups in both countries to undertake the research activities. Moreover, at the end of the joint research period, the developing country must have prospects for continuing to manage and maintain the equipment provided and continue with research—Setup for research in both countries.

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

It is vital for the PI 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—Competent PI.

(2) Considerations for the selection process

The proposal (project) will be favorably evaluated if the plan involves a high standard of scientific and technological knowledge, is specific and practical rather than general, and has a clear definition of the orientation, timing, and methodology to be used for utilizing the research outcomes in society. It is desirable that the institution in the developing country constructs partnerships with private-sector and affiliated government entities during the period of the project, so that when the project comes to an end, the setup remains in place and capabilities continue to be strengthened, enabling the research and development process to continue, and the research outcomes to be utilized in society. Furthermore, it is desirable that the approach for returning outcomes to society should involve partnerships with Japanese government, public entities, private businesses such as BOP (base of pyramid) businesses or Japanese SMEs expanding internationally, or with NPOs, and other grassroots activities.

The direction for returning research outcomes to society after the research project terminates is clearer if the entity likely to take on that role participates from the initial stages of research and development. From that perspective, for 2013, proposals incorporating partnerships with corporations (industry-academia-government collaboration) are particularly welcomed.

Proposals similar to the projects selected from FY2008 to FY2012 will be reviewed based on scientific merit, such as whether essential scientific differences exist in terms of aspects of the research objective, target, approach, region of implementation, etc. or whether greater outcomes can be expected under competitive implementation with existing similar projects. Selected projects are assumed to have ideas for returning research outcomes to society that can be implemented within the project period or after the project finishes. For this reason, research proposals with particulars that represent a simple continuation of existing SATREPS projects (whether still in progress or already finished) are not normally eligible for selection.

For projects involving African nations, additional consideration will be given to whether the project plan enhances human resources in the region, whether it is based on local surveys and data analysis, and whether it is designed to develop and apply appropriate technology or technology of direct utility in coping with problems.

Considering the importance of nurturing young talent, applications are encouraged that propose research teams whose PI is a young researcher under 45 years old or on which more than half of the research team in Japan (scheduled to engage in the research during the research period) are researchers under 35 years old (to be noted in Form 3). Proposals structured to meet these criteria may be looked upon more favorably than those that are not.

The PI must 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.

The institution where the PI is affiliated must possess the infrastructure for international research activities necessary to undertake the proposed joint research, as well as the intention to provide sufficient support and cooperation

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.

From the perspectives of diplomatic policy and science and technology policy, there is a need to maintain a balance among recipient countries and regions in order to assure balanced allocation of resources such as research funding, etc. Consequently, reviews of the proposal will take into account diplomatic and science & technology policies.

In principle, the program is designed so that research is conducted jointly with Japan and one other country; however, in view of the program dealing with issues on a global scale, proposals that can produce an impact on neighboring countries are also welcomed. In such cases, the plans for conducting international joint research involving Japan and more than one other country should be described when the research proposal is made. Research projects extending over several countries need to ensure that the ODA applications from each country are submitted by the deadline. The commencement of the research is also dependent on signing of an R/D with each of the countries involved.

Proposals involving a corporation or similar entity as the principle research institution need to meet certain conditions to be eligible for selection.

7. Selection process

(1) Two-step selection process

The peer review committee composed of experts in their relevant scientific disciplines appointed by JST will conduct the selection in two steps—document screening and interview. Please note that in cases such as lack of submission of the approval form from the affiliate institution, or lack of request from the prospective recipient country for an ODA project, the proposal submitted to JST will be considered incomplete and ineligible for selection.

(2) Exclusion of stakeholders

In accordance with JST regulations, stakeholders of the applicants, etc. will not participate in selection.

(3) Cooperation with MOFA, MEXT, and JICA in the selection process

At the selection stage, JST/MEXT will receive information from MOFA/JICA concerning progress of applications for technical cooperation projects and concerning the ODA screening process. Please be forewarned that JST will provide submitted documents and the results of documents and interview screenings to MOFA, MEXT, and JICA.

(4) Use of information contained in research proposal applications, etc.

Please be forewarned that information provided in the application may be used for limited purposes such as for screening by JST, or for operational purposes by MOFA, MEXT, JICA and JST in preparation for the following fiscal year, or by any of these four parties for sending out information. Information contained in the submitted documents will not be used for any purposes other than those described above and those given in "V. Notes for Application" without advance permission from the applicant.

8. Applicant requirements

The application should be written by the PI in person. Requirements concerning the applicant are as follows.

a) The applicant must fulfill the duties as PI for the international joint research project, and must engage in the international joint research from start to finish. In addition, after receiving conditional approval, PI must be able to attend meetings in Japan with JICA/JST (three to five times) and to visit the prospective ODA recipient country in a part of JICA's ex-ante evaluation (approx. 10 to 14 days during the period between July and September 2013).

b) PI must be affiliated with a Japanese research institution^{*11} and be able to secure a setup for conducting research at that institution. The director of the affiliate institution must guarantee the position of the PI during the research period.

Note: PIs scheduled to retire from the position during the research period are required to submit form 9 from the institution director with a guarantee of status in the institute.

The director who guarantees status must be the president or chair of the board or other person with responsibility for the whole of the institution that the PI is affiliated with. 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. Directors of subsidiary organizations such as deans, department heads, or center chiefs are not acceptable.

c) PI must be a researcher who is able to assume responsibility for the entire international joint research for the full duration of its implementation.

The PI must manage and control the whole project. This includes acting as the leader of the research team under JICA technical cooperation to oversee and coordinate the planning and implementation of Japan's inputs (including dispatching specialists, providing equipment and tools, inviting researchers from partner countries), reporting regularly to JST/JICA, submitting to JST/JICA's joint project appraisal, and traveling regularly to the partner country. As a rule, unilateral termination of the research activity at the PI's wishes midway through the implementation period will not be allowed.

d) PI, based on his/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. Applications that include the participation in the Japanese research team of research institutions in countries other than Japan or the ODA recipient country or researchers affiliated with such institutions, or that include joint research projects with research institutions in a third country will not be accepted.

*11 "Japanese research institutions" refers to universities, independent administrative institutions, public-sector research and development institutes, specially authorized corporations, public-service corporations, or private-sector corporations, etc.

9. Responsibilities of principal investigators (PIs)

The following responsibilities will take effect for the PI upon conditional selection.

a) Leading and managing the research

- PI shall be responsible for research, for planning and implementation of Japan's inputs to the work in the partner country (dispatch of experts, provision of equipment, inviting researchers from partner countries), and in the case of a research team being formed in Japan, for that research team. PI shall also attend meetings of the Joint Coordinating Committee (JCC: See IV.4(3)) held in the developing country to report on progress of the research and discuss operation and management.

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

- PI shall be responsible for consensus-building and coordination with administrative offices and other entities within the research institution.

b) Managing expenses under JST Commitment Research Agreement and JICA Operating Contract

In cooperation with the research institutions, PI shall appropriately manage expenses (planning and monitoring of spending, ensuring appropriate administration of research expenses, etc.) under the Commitment Research Agreement and Operating Contract. PI must appropriately manage research expenses for the entire research team. PI and the main research collaborator shall give consideration in regard to research and working conditions of researchers and other members who are employed using JST research expenses. There is also a requirement to submit to accounting investigations by JST/JICA and government audits, etc.

c) Treatment of research outcomes

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

- 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).

- Taking into account that this is an international joint research initiative, PIs 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 Commitment Research Agreement.

- When the PI participates in workshops or symposia organized by JST/JICA, he/she is expected to make a presentation of research outcomes.

d) Promoting "Public Dialogue in Science and Technology"

Based on "Promotion of Public Dialogue in Science and Technology (Basic Policy)" (June 19, 2010, Minister of State for Science and Technology Policy, Diet members with special knowledge of the Council for Science and Technology Policy; in Japanese), projects selected under the SATREPS program that

receive public research funding of 30 million yen or more per year are requested to take a proactive approach to dialogue with the general public in Japan about science and technology.

e) Each PI shall comply with the research agreement between JST and research institutions, other JST rules and regulations, the memorandum agreement with JICA, the R/D concluded between JICA and counterpart research institutions, and MOU related to the joint research concluded between research institutions.

f) JST will provide necessary information such as the titles of research projects, team members and the amount of research expenses to the Electronic system for Research and Development (e-Rad), and the Government Research and Development Database. JST might also request that PI or other members provide other information.

g) PI shall also provide information and submit to interviews on the occasion of the follow-up evaluation (JICA ex-post evaluation) after a fixed period from the research completion.

10. Requirements and responsibilities of research institutions

The requirements and responsibilities of Japanese research institutions (institutions to which the PI and other researchers of research projects that have been selected or conditionally selected are affiliated) are as described below.

When submitting an application, the application must include a consent letter from the director (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) of the institution to which the PI is affiliated (Form 9).

a) Research institutions, as the bodies which implement ODA technical cooperation, shall be required to provide support for activities (EX: Procedures to request payment of funds that have been awarded to the institution the PI is affiliated with) in accordance with the R/D and memorandum agreement with JICA. The institution to which the PI is affiliated may also be required to submit to government audits, etc.

- In principle, only the research institution which PI of the proposal is affiliated with will sign the Agreement with JICA; however, other research institutions involved in the research project are required to provide support for activities in accordance with the R/D. Accounting operations must be handled appropriately in accordance with the Operating Contract and the Operating Guidelines stipulated by JICA (including reporting to JICA as required).

b) All research expenses will be administered by the research institutions as commitment research expenses in accordance with the Commitment Research Agreement. Any research institution with which a Commitment Research Agreement cannot be concluded will not be able to carry out the research. Please cooperate with JST in facilitating the conclusion of the Commitment Research Agreement for the effective promotion of the research.

- Research institutions must prepare a management / audit organization for research expenses based on the "Guidelines on management and audit of public research expenses at research institutions (Practical Standard)" (Feb. 15, 2007, Decision by MEXT). In accordance with these Guidelines, research institutions shall also set up a system for managing and auditing research expenses and report to the details to MEXT, and submit to an on-site investigation. See the website below for the "Guidelines on management and audit of public research expenses at research institutions (Practical Standard)"

http://www.mext.go.jp/b_menu/shingi/chousa/gijyutu/008/houkoku/07020815.htm

- Necessary reports must be made to JST when applying for and after obtaining intellectual property rights vested in the research institutions under the Commitment Research Agreement in accordance with Article 19 of the Industrial Technology Enhancement Act (Japanese version of the Bayh-Dole Act).

- JST will examine the propriety and methods of commitment in advance of signing a research contract with corporations and institutions specified by JST. JST may ask that you follow a specific commitment method, as a result of the examination. In the event the financial status of the organization is seriously

unstable, JST may determine that the research institution is not suited to conduct the research the application was made for. In such a case, you will be asked to reorganize your research team.

c) Apart from the R/D, the research institution that the PI is affiliated with must sign a Memorandum of Understanding (MOU) with the research institution in the partner country regarding the international research collaboration. The MOU should include the treatment of intellectual property rights, handling of confidential information, publication of research results, warranty and indemnification, and access and transfer of the bio-resources in the partner country. A draft of the MOU should be approved by JST before signing. It is best to sign and exchange MOU 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 MOU signed by the research institution PI is affiliated with.

d) A research institution entering a Commitment 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. (EX: 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)

11. Research period/Duration of research

The period of international joint research (Period to conduct the technical cooperation project) is three to five years.

The period specified in the R/D shall be the period during which the international joint research is conducted. Within the limits of the budget for JST commitment research expenses determined at the time of conditional selection, it may be possible to extend the completion date for research activities in Japan funded by JST commitment 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 conditional selection of research projects, JST commitment research expenses are available to Japanese research institutions before the signing of R/D and other agreements (MOU, 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.

12. Research expenses (JST commitment research expenses)

In this program, JST will provide financial support to the Japanese research institution for the project activities in Japan and JICA will provide financial support to the research institution in the ODA recipient countries within the framework of technical cooperation projects.

Points (1)-(3) below concern research expenses covered by JST. For information on costs covered by JICA, please refer to "Outline of ODA Technical Cooperation."

(1) The overall Research Expenses awarded by JST per project shall be approximately JYE 36 million per year (including indirect costs and overhead) (approximate total of JYE 180 million for a five year project).

The amount is a rough indication. Proposals requiring research funds beyond the amount noted above are also eligible to apply. Please be forewarned that changes and adjustments may be required according to budgetary considerations.

Cost performance will also be an important factor for consideration during the selection process. Proposals with high expenses, compared to those with lower expenses, will be expected to yield substantially greater research results, and require much greater responsibility. Carefully examine your research expenses.

(2) JST will issue the full amount of research funds granted to the research institutions that PI and main research collaborators are affiliated with. The funds should be managed by the institution. An amount equivalent to up to 30% of the direct cost can be appropriated from within the commitment research expenses for indirect research expenses incurred by the research institution in relation to the commitment research.

Handling and categorization of expenses for projects are based on cross-ministerial expenses categorization. For details of how to handle expenses, refer to the cross-ministerial expenses categorization table that can be accessed from the website below (only in Japanese):

<http://www.jst.go.jp/global/itaku.html>

(3) When JST enters a multi-year research contract with nonprofit organizations such as universities, according to the progress of the research plan, research funds not used in the relevant year may be carried over to the following year through a simple procedure. Other details of procedures for JST contract research funding can be found in the documents pertaining to the FY2012 Commitment Research in the website below (only in Japanese):

<http://www.jst.go.jp/global/itaku.html>

Note: The standard procedures for carrying over research funds do not apply to the end of the period for JST's medium-term targets (end of FY2016). Different procedures and requirements (restrictions of scope) apply.

13. Expenses covered by JST and JICA

As a rule, research expenses are categorized into those covered by JST as commitment research expenses and those covered by JICA as project costs, as described below: (See also Table 2.)

a) Research expenses incurred in Japan and other locations outside the developing country will be supported by JST as commitment research expenses.

b) Costs incurred within the developing country (research activity costs, research equipment and supplies procured) are shouldered by JICA. (Travel costs for developing country researchers visiting Japan shall also be the responsibility of the 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 born by JICA (Travel expenses to and from the country, relocation fees and other allowances for long-term dispatch for a period over one year)^{*12} 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.

^{*12} 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 (For example, researchers of the developing country institute employed in Japan as post-doctoral researchers). However, trips covered by JST funds will not be considered activities as prescribed by the R/D for the international joint research in question: tax immunity provisions may not apply, and permission for on-ground activities may not be granted. Consult with JICA in advance.

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,

In principle, for each project JICA recruits a project coordinator to act as the PI's assistant in the ODA recipient country, performing office work including accounting. Project coordinators are recruited through a transparent recruiting process and stationed long-term in the developing country.

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) Research expenses incurred in partner countries (Research activity costs, on-site equipment procurement, etc.)	Exceptionally (Note 2)	YES (Note 3)
B) Travel expenses to invite researchers to Japan from partner countries		YES
C) Travel expenses between Japan and partner countries for Japanese researchers		YES

Table 2. 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 research expenses that are not covered by JICA. (Please consult with JST/JICA about costs incurred for the employment of local post-doctoral and technical staff. There are cases in which such expenses can be met.)

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. 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 equipment provided, domestic transportation fees for local researchers, conference attendance allowances, and other miscellaneous costs) should in principle be covered by its own country.

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.

14. Filling out research proposal application forms

The PI should prepare and submit research proposal forms 0 to 10 in close consultation with the partner institution.

- Please download the Research Proposal Application Forms from e-Rad (the Cross-Ministerial R&D Management System).

- When submitting applications via e-Rad, you will be asked to enter some of the information noted in the Research Proposal Forms. Please make sure that there is no variance in the information in the e-Rad input and the application forms.

- Submit Form 9 with the institution director's official seal affixed (using PDF format, etc.) together with forms 0 to 8 along with form 10, combined into a single file before uploading to e-Rad.

Form 0	Proposal Coordination Status
Form 1	Proposal
Form 2	Research Theme Concept
Form 3	Japanese Institution Implementation Structure
Form 4	Counterpart Institution Implementation Structure
Form 5	Research Expense Plan
Form 6	Research Project Keywords
Form 7	Grants received through other programs
Form 8	Contact Information for PI and Affiliated Institution
Form9	Written Approval from Institution Director
Form10	Research plans by private-sector corporations, etc.

Table 3. Forms for Research Proposal Applications

IV. Overview of ODA Technical Cooperation

2. ODA technical cooperation

The objective of JICA operations is to contribute to the promotion of international cooperation and sound economic development of Japan and countries throughout the world through financial and social development and restoration of developing nations and regions and the economic stability of such countries. JICA provides technical cooperation (accepting trainees, dispatching experts, providing equipment, etc.), ODA loan assistance, grant aid, promotion and encouragement of cooperation among citizens (dispatching Japan Overseas Cooperation Volunteers, etc.), and emergency disaster relief assistance.

In technical cooperation schemes, JICA provides means to support developing countries by capacity building and institutional development so that the country may evolve a comprehensive and intrinsic capacity to independently deal with developmental issues.

Technical cooperation projects, which are one form of technical cooperation, are defined as “Projects to be executed and managed integrally based on pre-agreed cooperation plans with the objective of achieving a certain level of results within a specific period. Results to be achieved within the project period, and the activities and investments input to achieve the results must be clear and logical.” High achievement is expected to be achieved by dispatching experts, receiving trainees, providing equipment and financial assistance in a flexible manner to comprehensively and schematically execute and operate throughout the series of processes from planning, execution to evaluation of the project plan.

The Science and Technology Research Partnership for Sustainable Development is a program for joint projects between research institutions in Japan and developing countries that are implemented within the framework of ODA Technical Cooperation Projects. Consequently, SATREPS projects systematically conduct research as partnerships between research institutions in Japan and developing countries.

9. Inquiries about ODA technical cooperation

For detailed information about ODA technical cooperation, please contact the JICA headquarters in Tokyo, Japan or one of the JICA overseas offices in developing countries.

Japan International Cooperation Agency (JICA)

- JICA Headquarters

<http://www.jica.go.jp/english/contact/>

- JICA overseas offices in developing countries

<http://www.jica.go.jp/english/contact/overseas/>

Inquiries should preferably be made by email, except when urgent.
Updated information will be posted on the SATREPS research proposal website.
<http://www.jst.go.jp/global/english/koubo.html>

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