Defense Related Budget of FY2019

May. 2019

JAPAN MINISTRY OF

D E F E N S E

Details of FY2019 Defense Budget

【Expenditures (classified into three categories)】

（Unit：JPY 100 million）

	JFY 2018 Budget	Year on Year Change	FY2019 Budget	Year on Year Change
Defense-Related Expenses	４９，３８８ （５１，９１１）	３９２[０．８] （６６０[１．３]）	５０，０７０ （５２，５７４）	６８２[１．４] （６６３[１．３]）
Personnel and Provisions Expenses	２１，８５０	１８７[０．９]	２１，８３１	△１９[△０．１]
Material Expenses	２７，５３８ （３０，０６１）	２０５[０．７] （４７２[１．６]）	２８，２３９ （３０，７４４）	７０１[２．５] （６８２[２．３]）
Obligatory Outlay Expenses	１７，５９０ （１８，８９８）	２２６[１．３] （１３１[０．７]）	１８，４３１ （１９，６７５）	８４１[４．８] （７７７[４．１]）
General Material Expenses (Activity Expenses)	９，９４９ （１１，１６３）	△２１[△０．２] （３４１[３．２]）	９，８０８ （１１，０６８）	△１４１[△１．４] （△９５[△０．８]）

(Note) 1. []: Growth rate (%) (the same hereinafter)
2. Figures may not add up to the total due to rounding (the same hereinafter).
3. The upper figures in each cell does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/reduction and national resilience. The lower figures in parentheses indicate the expenses that include those above.
4. Exchange rate for JFY2019 Defense Budget Request: 1USD=JPY110 (the same hereinafter).

【Future Obligatory Outlay Expenses from New Contracts】

（Unit: JPY 100 million）

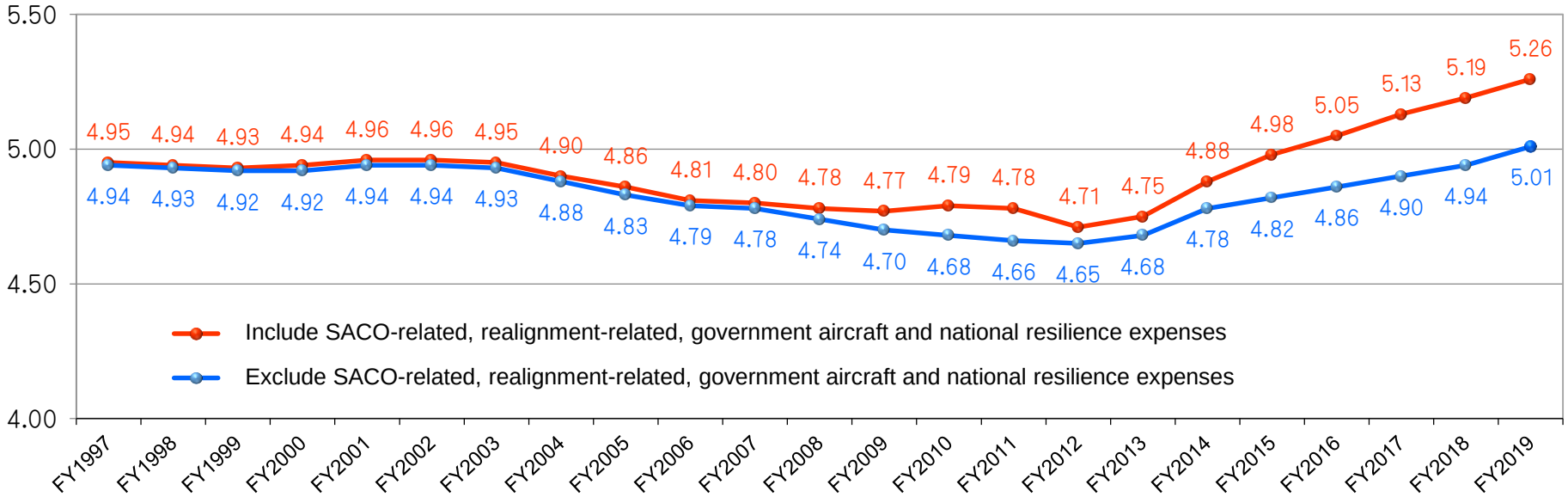
	JFY 2018 Budget	Year on Year Change	FY2019 Budget	Year on Year Change
Total	１９，９３８ （２１，１６４）	２３８[１．２] （△１３５[△０．６]）	２４，０１３ （２５，７８１）	４，０７４[２０．４] （４，６１７[２１．８]）
Conventional Portion	１９，６６６	５１９[２．７]	２２，１２１	２，４５５[１２．５]
Long-Term Contracts	２７２	△２８１[△５０．８]	１，８９２	１，６２０[５９４．９]

(Note) 1. []: Growth rate (%) (the same hereinafter)
2. The upper figures in each cell does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/reduction and national resilience. The lower figures in parentheses indicate the expenses that include those above.
3. Details of long-term contract are:
FY2018: Performance Based Logistics (PBL) for maintenance components of F110 engine (for fighter aircraft (F-2))
FY2019: Comprehensive contract for components of PAC-3 missiles (¥3 billion), procurement of Airborne Early-Warning Aircraft (E-2D) (¥186.2 billion)

Details of FY2019 Defense Budget

Total Amount Transition

（Unit：JPY 1 trillion）



Transition of the Growth Rate

(Unit: %)

	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Include SACO-related, realignment-related, government aircraft and national resilience expenses	2.1	△ 0.2	△ 0.2	0.1	0.4	0.0	△ 0.1	△ 1.0	△ 1.0	△ 0.9	△ 0.3	△ 0.5	△ 0.1	△ 0.3	△ 0.3	△ 1.3	0.8	2.8	2.0	1.5	1.4	1.3	1.3
Exclude SACO-related, realignment-related, government aircraft, and national resilience expenses	2.0	△ 0.3	△ 0.2	0.0	0.3	0.0	△ 0.3	△ 1.0	△ 1.0	△ 0.8	△ 0.2	△ 0.8	△ 0.8	△ 0.4	△ 0.4	△ 0.4	0.8	2.2	0.8	0.8	0.8	0.8	1.4

Note: The above figures are on an expenditure base.

Major Programs in FY2019 Defense Budget

○ Based on new National Defense Program Guidelines and Medium Term Defense Program, Japan will significantly strengthen defense capability to build a truly effective defense capability, "Multi-Domain Defense Force," which: organically fuses capabilities in all domains including space, cyberspace and electromagnetic spectrum; and is capable of sustained conduct of flexible and strategic activities during all phases from peacetime to armed contingencies.

○ Priorities in Strengthening Capabilities Necessary for Cross-Domain Operations

(Strengthening Capabilities in Space Domain)

□ Development of Space Situational Awareness (SSA) System (¥26 billion)

・ Develop Deep Space (※) radar and operation system to perform Space Situational Awareness in cooperation with the U.S. and the relevant domestic organizations such as the Japan Aerospace Exploration Agency (JAXA).

*Deep Space: outside of the altitude of approximately 5,800km

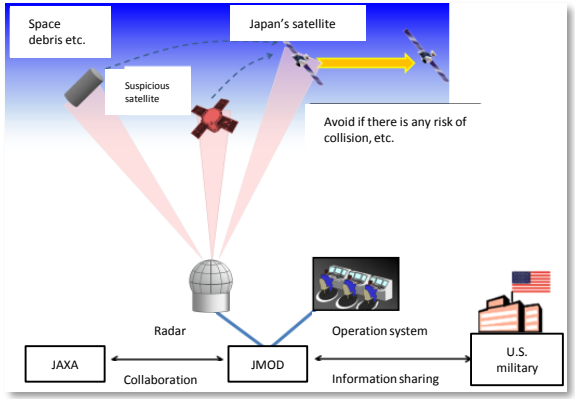
□ Research and Study for Strengthening the C4ISR (*) Functions by Utilizing Space (¥180 Million)

・ Research and study on the vulnerabilities of satellites and their countermeasure as well as the space electromagnetic spectrum surveillance posture in order to secure stable utilization of outer space.

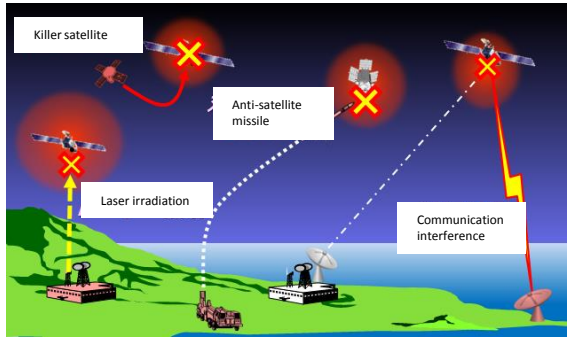
*C4ISR: Command, Control, Communication, Computer, Intelligence, Surveillance, Reconnaissance

□ Research and Study on SSA Capability Enhancement, Including Space-based Optical Telescope (¥30 Million)

・ Research and study on technological trends of SSA capability enhancement including space-based optical telescope to identify characteristics of space debris and unidentified objects, which fly around Japan's satellites on the geostationary orbit.



SSA System and its Operation (conceptual image)



Threat against Stable Use of Outer Space (conceptual image)

Major Programs in FY2019 Defense Budget

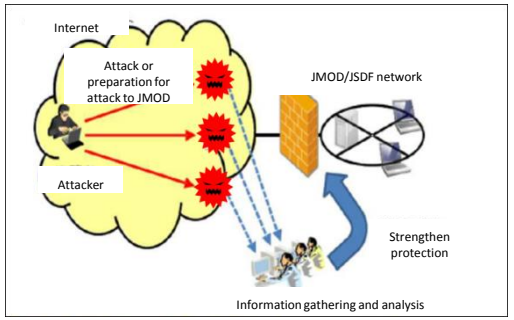
(Strengthening Capabilities in Cyber Domain)

☐ Enhancement and Strengthening of Cyber Defense Group (150 → 220 personnel)

・ Increase the number of Cyber Defense Group for approximately 70 personnel to drastically strengthen cyber defense capability.

☐ Procurement of Cyber Information Gathering Devices (¥3.6 billion)

・ In order to gather information on the tactics, techniques and procedures (TTPs) of cyber attacks against the JMOD/JSDF, the JMOD will procure cyber information gathering devices.



Development of Cyber Information Gathering Devices (conceptual image)

☐ Utilization of External Capabilities Related to Response to Cyber Attacks (¥2.3 billion)

・ Utilization of external capabilities for tasks that require advanced expertise on response to cyber attacks.

(Strengthening Capabilities in Electromagnetic Domains)

☐ Improvement of F-15's Electronic Warfare (EW) Capability

・ Conduct refurbishment of F-15 fighter jets to load new electronic warfare devices with ability to respond to increased capabilities of neighboring countries' air forces. ※ Refer to the next slide for the details of program in general.

Improvement of Electronic Warfare Capability for F-15 Fighters Jets

☐ Improvement of Sharing/Processing Capability of Electronic Warfare Information of the Japan Aerospace Defense Ground Environment (JADGE) (¥2.9 Billion)

☐ Strengthening Policy Planning Function for Electronic Warfare

・ Establishment of specialized division in Internal Bureau to strengthen project planning related to effective/efficient utilization of electromagnetic spectrum in the JMOD/JSDF and coordination with other ministries and agencies.

・ Establishment of specialized division in Joint Staff for project planning related to joint operation in the field of electromagnetic spectrum.

☐ Research and Study for Optimal Joint Electromagnetic Spectrum Management (¥3 million)

・ Research and study on the technical aspects of information sharing among JSDF forces on effective utilization of electromagnetic spectrum for cross-domain joint operation.

Improvement of JADGE Capability (conceptual image)

Major Programs in FY2019 Defense Budget

(Strengthening Capabilities in Maritime and Air Domains)

☐ **Procurement of F-35A (6 aircraft: ¥68.1 billion. Importing completed aircraft)**

☐ **Upgrade of F-15 (2 aircraft: ¥10.8 billion)**
***Excluding ¥41.2 billion of non-recurring cost.**

・ Upgrade to load standoff missile (JASSM, etc.), increase the number of weapons to carry, and improve electronic warfare capabilities in order to provide effective defense against surrounding countries' modernized air forces.

☐ **Procurement of airborne early-warning aircraft (E-2D) (9 aircraft: ¥194 billion)**

・ Procurement of 9 airborne early-warning aircraft (E-2D) to strengthen ISR capabilities in airspace around Japan
*Conduct efficient procurement through bulk-procurement

☐ **Procurement of Long-Endurance UAV (Global Hawk): (¥7.1 billion)**

☐ **Construction of Multi-Purpose Compact Destroyer (2 ships: ¥95.1 billion)**

☐ **Construction of Submarine (1 ship: ¥69.8 billion)**

☐ **Research and study for refurbishing destroyer Izumo (¥70 million)**

・ Conduct research and study necessary for refurbishment to operate short take-off and vertical landing (STOVL) aircraft.

☐ **Research on Long-Endurance, Multi-Purpose UUV (¥4.2 Billion)**

☐ **Establishment of "Airborne Warning and Control Wing"**

・ Establish Airborne Warning and Control Wing by abolishing Airborne Warning and Control Group to strengthen posture for continuous surveillance activities by Airborne Early Warning Aircraft, etc.

(Strengthening Stand-off Defense Capability)

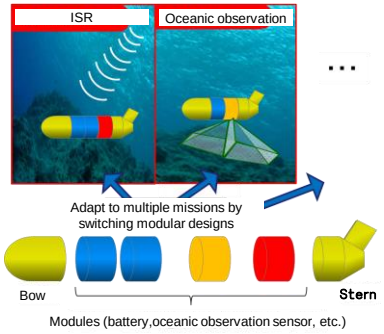
☐ **Procurement of stand-off missiles (JSM) (¥7.9 billion)**

Fighter Jets (F-35A)

Standoff Missile

Fighter Jets (F-15)

FY2019 Destroyer (3,900t class) (conceptual image)



Research on modular UUV (conceptual image)

Major Programs in FY2019 Defense Budget

(Strengthening Comprehensive Air and Missile Defense Capability)

☐ **Introduction of Land-Based Aegis System ("Aegis Ashore")**

- Procurement of 2 units of Aegis Ashore with cutting-edge radar (LMSSR) that drastically improve ballistic missile defense capability such as response against lofted trajectory projectiles (procurement cost of 1 unit: ¥120.2 billion)

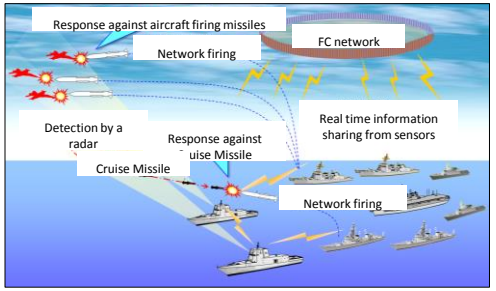
Accumulated cost※ to JFY2019 budget: ¥175.7 billion
***include related costs**

Aegis Ashore

☐ **Procurement of SM-3 Block IIA and SM-3 Block IB (¥71.7 billion)**

*Conduct efficient procurement through bulk-procurement for SM-3 Block IB

☐ **Research on Fire-Control Network that Enables Network Launches through Real Time Sharing of Sensor Information within the Destroyer Fleet (¥6.3 billion)**



Research on FC Network

☐ **Procprocurement of Type-03 Medium-Range Surface-to-Air Missile (Improved Version) (¥14.1 billion)**

(Strengthening Maneuver and Deployment Capability)

☐ **Training to Enhance/Develop Rapidly Deployable Ground Defense Forces (¥7.5 billion)**

- Maintain/improve high unit readiness, demonstrate its presence from peacetime, and strengthen deterrence/response capability by effectively conducting training at various environments in and out of Japan, mainly for Amphibious Rapid Deployment Brigade and Deployment Division/Brigade.

Trainings (conceptual image)

☐ **Procurement of New Utility Helicopter (UH-X) (6 Aircraft: ¥11 Billion)**

- Procure new utility helicopter (joint developed with private sector for dual-use purpose to achieve cost effectiveness) for rapid deployment through air maneuver and airlift.

☐ **Procurement of C-2 Transport Aircraft (2 Aircraft: ¥45.3 billion)**

- Procure transport aircraft that contribute to large scale deployment by improving flight range and payload

(*Cost per aircraft, excluding engine, is ¥16.3 billion compared to ¥17.2 billion of JFY2018 budget (decrease by ¥900 million))

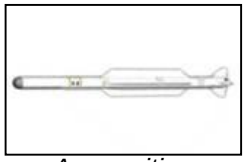
Transport Aircraft(C-2)

Major Programs in FY2019 Defense Budget

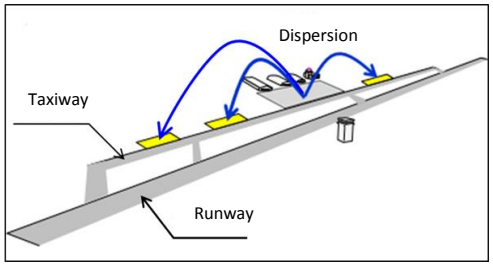
(Strengthening Sustainability and Resiliency)

- ☐ **Procurement of Ammunition (Anti-Air Missile, Torpedo) Needed to Secure Air and Sea Superiority (¥45.5 billion)**
- ☐ **Development for Dispersion Pads at Air Bases for Enhancing Resiliency (¥20 Million)**
- ☐ **Procurement of Crude Oil Tanker (tentative name) for Support Capability of JMSDF Vessels (2 Ships: ¥5.7 billion)**
- ☐ **Secure necessary budget for Maintenance to Improve Equipment Operational Availability (¥895.3 billion)**

Ammunition (AIM-120)



Ammunition (AAM-5B)

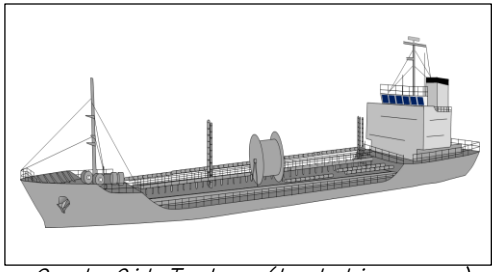


Development of Dispersion Pads (conceptual image)

○ Priorities in Strengthening Core Elements of Defense Capability

(Reinforcing Human Resource Base)

- ☐ **Appointment of SDF Reserve Personnel with No Previous SDF Experience to SDF Ready Reserve Personnel (¥60 Million)**
  - In order to provide sufficient SDF Ready Reserve Personnel, appoint SDF Reserve Personnel with no previous SDF experience in addition to SDF Reserve Personnel who are retired SDF personnel.
- ☐ **Improvement of the Working Environment for Female SDF Personnel (¥2.6 billion)**
- ☐ **Development of fixtures, daily necessities, etc. to improve living and working environment for SDF personnel (¥2.4 billion)**
- ☐ **Build Nurseries (at National Defense Medical College) and Provide Furniture/Fixtures, etc. (¥80 Million)**



Crude Oil Tanker (tentative name) (conceptual image)

Workplace Nurseries in SDF (conceptual image)

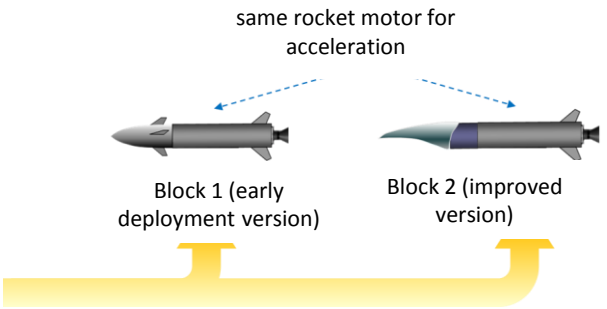
Major Programs in FY2019 Defense Budget

(Strengthening Technological Bases)

【Promotion of R&D for Early Practical Use】

☐ **Research on HVGP (Hyper Velocity Gliding Projectile) for Defense of Remote Islands (¥13.9 billion)**

・ Promote early practical usage of HVGP by stepwise development to utilize research results promptly. HVGP intended for the defense of remote islands can glide at high velocity and attack a target in order to enable island-to-island firing.

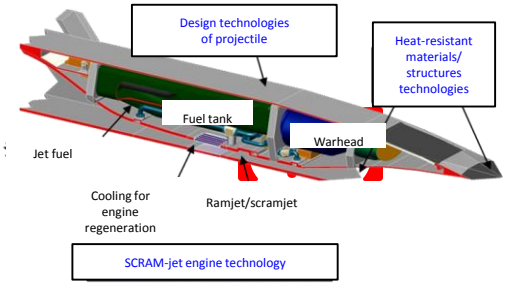


Stepwise Development of HVGP for Defense of Remote Islands (conceptual image)

【Promotion of Strategic Effort to Ensure Technological Superiority】

☐ **Research on Component Technologies of Hypersonic Cruise Weapons (¥5.8 billion)**

・ Conduct research on component technologies of SCRAM-jet engines operated by jet fuel, to realize propulsion device which is capable of cruising in hypersonic environment (five times faster than the speed of sound).



Research on Element Technologies of Hypersonic Cruise Projectile (conceptual image)

【Promotion of Optimized Procurement through Project Management】

☐ **Research on Mission System Integration of Fighters and Others (¥5.7 billion)**

・ Conduct research on the integration technology of the mission system, which is a basis for operation/mission execution capabilities, to design mission system flexibly through the life cycle.

【Promotion of Defense Equipment and Technology Cooperation】

☐ **Promotion of Effective Defense Equipment and Technology Cooperation with Various Countries on a Case-by-Case Basis (tailored) Approach (¥1 billion)**

・ Strategically gather information to realize cooperation with various countries tailored to their respective situations, and disseminating information regarding Japan's defense equipment through public-private joint efforts.

Exhibition of P-1 Maritime Patrol Aircraft (ILA Berlin Air Show 2018)

【Promotion of Measures to Maintain and Strengthen Defense Production and Technological Bases】

☐ **Identify/ Utilize Small/Medium-Sized Enterprises' Advanced Technologies and Grasp/Address the Entirety and Shortcoming of the Supply Chain (¥900 million)**

Major Programs in FY2019 Defense Budget

○ Actions based on 3 -Year Emergency Measures for Disaster Prevention/Reduction and National Resilience

□ Emergency measures related to SDF equipment for disaster prevention and facilities (¥50.8 billion)

① Conduct rapid development of equipment that is necessary for rescue operations when dispatching personnel to disasters, considering malfunctions from aging equipment and to enhance the operations.

Develop Floating Boat (conceptual image)

Maintenance and Repair of Medium-Sized Dozer (conceptual image)

② Since facilities with risks against prosecution of swift and appropriate missions are identified, conduct aseismic construction and upgrade of aging facilities.

Reinforcement of Building Structure through External Reinforcement and Construction of Additional Internal Walls (conceptual image)

*The projects related to 3 -year emergency measures for disaster prevention/reduction and national resilience are to be conducted concentratedly as emergency measures for upcoming 3 years. In the FY2019 and FY2020 original budget, it requires utilization of extraordinary/special measures. Therefore, the projects will be conducted separately from building of defense capability based on the MTDP.

FY2019 Tax Reform

○ Expansion of Tax Exemption Measures for the case of Provision of Tax-Exempt Light Oil based on ACSA (Acquisition and Cross-Servicing Agreement)

【Light Oil Delivery Tax】

Currently, special measures for exemption of Light Oil Delivery Tax is applied to the JMOD when providing tax-exempt light oil to Australia and UK based on ACSA. After the new ACSA are concluded with Canada and France, the special measures for tax exemption will be applied to the JMOD in case of providing tax-exempt light oil to Canada and France based on the new ACSA.

Providing Light Oil to the Foreign Military Vessel at Sea

○ Extension and expansion research and development tax credit

(Joint Request: Ministry of Economy, Trade and Industry (METI), Ministry of Internal Affairs and Communications (MIC), Ministry of Education, Culture, Sports, Science and Technology (MEXT), Ministry of Health, Labour and Welfare (MHLW), Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Land, Infrastructure, Transport and Tourism (MLIT), and Ministry of Environment (MOE))

【Income Tax, Corporation Tax】
【Corporate Inhabitant Tax】

Regarding the research and development tax credit, extend the application deadline of addition measures for 2 years after expanding a part of the system.

○ Establishment of Tax Exemption Measure for the Australian Defense Force based on an Agreement Concerning the Facilitation of Reciprocal Access between Japan and Australia(tentative name)

(Joint Request: Ministry of Foreign Affairs (MOFA))
【Internal Consumption Tax, Fuel Loading Tax】
【Local Consumption Tax, Light Oil Delivery Tax, Automobile Acquisition Tax, Automobile Tax, Light Motor Vehicle Tax】

An Agreement Concerning the Facilitation of Reciprocal Access between Japan and Australia (tentative name), which is currently being negotiated is expected to include a clause for special tax measures for the Australian Defense Force(ADF) accepted as a visiting force under this agreement.

Japan-Australia Foreign and Defense Ministerial Meeting (October 10, 2018)