Defense Related Budget Request for JFY2019

Sep. 2018

JAPAN MINISTRY OF DEFENSE

Overview of JFY 2019 Budget Request

Background

- Prime Minister Abe announced in his Policy Address to the 196th Session of the Diet in January 2018 that the GOJ would, while maintaining the exclusively defense-oriented policy as given, revise the National Defense Program Guidelines (NDPG). In the background is the imperative to identify defense capabilities that are truly needed to protect the Japanese people, and in doing so, the Government must squarely face the harsh reality in Japan's surroundings rather than simply extending the existing capabilities.
- As the current Mid-Term Defense Program (MTDP) ends in JFY2018, the GOJ is reviewing the NDPG targeting to revise it by the end of December 2018.
- The JMOD, based on its work to date, released "Overview of JFY 2019 Budget Request," which outlines the fundamental ideas and force development priorities.

Fundamental Ideas

- In order to fully provide for Japan's defense towards the future in the severe security environment, Japan will substantially bolster its defense capability, thereby establishing a defense posture that squarely addresses the reality.
  - Develop a cross-domain defense capability that holistically leverages capabilities in new domains such as space, cyber and electromagnetic spectrum on top of the existing domains of land, sea, and air.
  - The Japan-U.S. Alliance as well as defense cooperation with India, Australia, ASEAN countries and other partners can work very effectively in maintaining peace and stability of Japan and the region. Japan should develop a defense capability that can further deepen and expand these endeavors.
  - Defense capability development requires time. Japan's capability development should take into account Japan's demographic trends, other countries' military developments and future technological trends.

- Key tenets : focused resource allocation to priority areas, strengthening of human foundation that accommodates low birth rate and aging population, strengthening of technological bases including structural reform of R&D, strengthening of Japan-U.S. Alliance and enhancing cooperation with other nations in light of changing strategic environment.

Overview of JFY 2019 Request

Given the severe security environment surrounding Japan, it is critical to secure necessary and sufficient "quality" and "quantity" of defense capability. Besides conventional domains of land, sea, and airspace, it is vitally important to utilize new domains, such as space, cyber, and electromagnetic spectrum. Japan needs to establish a defense posture that enables cross-domain operations. The following are force development priorities.

Strengthening Capabilities in New Domains

- In view of diversifying and intensifying threats in space, cyber and electromagnetic spectrum domains, in order to protect lives and properties of Japanese people from various threats, Japan needs to strengthen response capabilities in space domain, strengthen readiness for addressing cyber attacks and improve response capabilities against attacks in the electromagnetic spectrum.

Strengthening Capabilities in Sea and Air Domains

- It is essential to maintain and strengthen air and maritime superiority in defense of Japan. Also, it is important to counter invasions from stand-off distance by long-range missiles and by island-to-island firing.

Strengthening Response Capabilities against Ballistic and Cruise Missile Attacks

- In light of diversifying and intensifying threats posed by ballistic and cruise missiles, it is crucial to effectively and efficiently respond to these threats by effectively combining and integrating all capabilities of the three SDF services.

Strengthening Mobilization/Deployment Capabilities

- To enhance deterrence and response capabilities, it is important to improve the effectiveness of rapid and seamless deployment of units from peacetime and to strengthen presence.

Strengthening SDF Operational Bases

- In order for the SDF to respond to various situations continuously, Japan needs to ensure resiliency of camps, bases and other facilities as operational bases for the SDF, to secure necessary ammunition and fuel, and to increase equipment operational-rate.

Strengthening Human Foundation

- To bolster human foundation, which underpins SDF missions, it is necessary to implement various measures as a whole, including recruiting and retaining highly capable personnel, promoting active participation of female personnel, improving work-life balance and enhancing the SDF Reserve Personnel system.

Strengthening Technological Bases

- In times of rapid technological innovation, in order to maintain quality and quantity of highly advanced defense equipment, it is necessary to promote measures for quick turnaround of R&D and ensure technological superiority.

Details of JFY 2019 Defense Budget (Budget Request)

【Expenditures (classified into three categories)】

(Unit : JPY 100 billion)

	JFY 2018 Budget	Year on Year Change	JFY 2019 Budget Request	Year on Year Change
Defense-Related Expenses	49,388 (51,911)	392[0.8] (660[1.3])	52,926 (52,986)	3,538[7.2] (1,075[2.1])
Personnel and Provisions Expenses	21,850	187[0.9]	21,908	59[0.3]
Material Expenses	27,538 (30,061)	205[0.7] (472[1.6])	31,017 (31,078)	3,479[12.6] (1,017[3.4])
Obligatory Outlay Expenses	17,590 (18,898)	226[1.3] (131[0.7])	20,647 (20,708)	3,057[17.4] (1,809[9.6])
General Material Expenses (Activity Expenses)	9,949 (11,163)	△21[△0.2] (341[3.2])	10,370 (10,370)	422[4.2] (△793[△7.1])

(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 do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new government aircraft. The lower figures in parentheses indicate the expenses which include those above. ※ As for JFY2019 Budget Request, concrete figures of SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are not enumerated and will be requested by the end of December 2018. Therefore, the lower figures in parentheses for FY2019 only include expenses for the introduction of new government aircraft (the same hereinafter).
4. Exchange rate for JFY2019 Defense Budget Request: 1USD=JPY110 (the same hereinafter).

【Future Obligatory Outlay Expenses from New Contracts】

(Unit: JPY 100 billion)

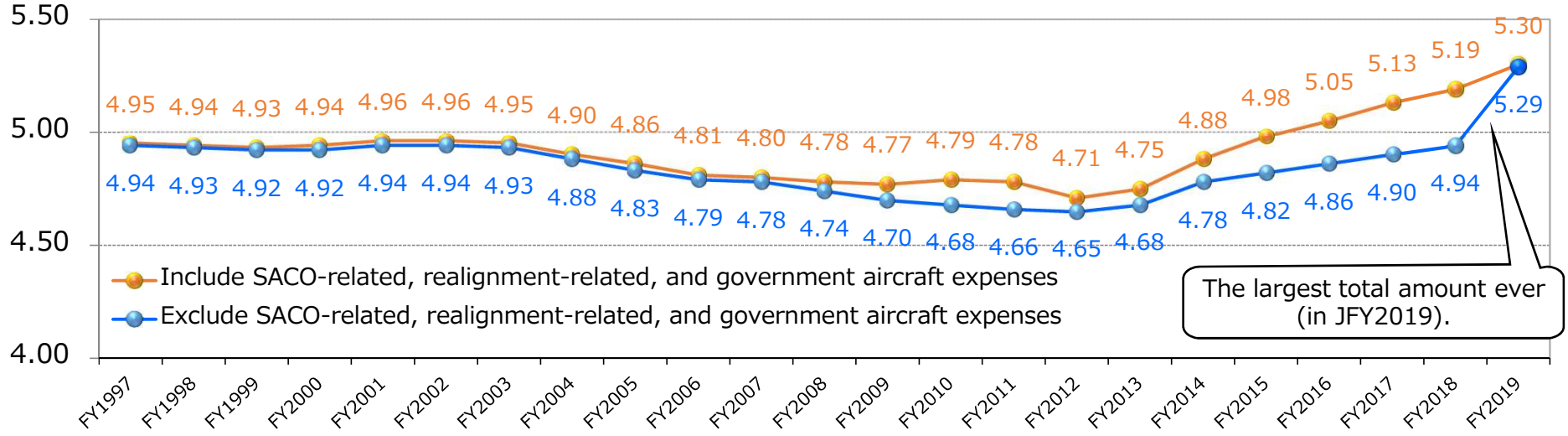
	JFY 2018 Budget	Year on Year Change	JFY 2019 Budget	Year on Year Change
Total	19,938 (21,164)	238[1.2] (△135[△0.6])	25,141 (25,141)	5,203[26.1] (3,977[18.8])
Conventional Portion	19,666	519[2.7]	25,109	5,443[27.7]
Long-Term Contracts	272	△281[△50.8]	32	△240[△88.1]

(note)
1. []: Growth rate (%) (the same hereinafter)
2. The upper figures in each cell do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new government aircraft. The lower figures in parentheses indicate the expenses which include those above. ※ As for JFY 2019 Budget Request, concrete figures of SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are not enumerated and will be requested by the end of December2018.
3. Details of long-term contracts are: JFY2018: PBL for maintenance components of F110 Engine (for fighter aircraft (F-2))
JFY2019: Comprehensive contracts for components of PAC-3 missiles

Details of JFY 2019 Defense Budget (Budget Request)

Total Amount Transition

(Unit : JPY 1 trillion)



Transition of the Growth Rate: increase of approximately 7.2% compared to last year's budget (in JFY2019)

	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, and government aircraft 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	0.9	2.8	2.0	1.5	1.4	1.3	2.1
Exclude SACO-related, realignment-related, and government aircraft 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	7.2

＊As for FY2019 Budget Request, concrete figures of SACO-related expenses and U.S. Forces realignment-related expenses(the portion allocated for mitigating the impact on local communities) are not enumerated and will be requested by the end of 2018. Therefore, the lower figures in parentheses for FY2019 only include expenses for the introduction of new government aircraft

Major Programs in JFY2019 Defense Budget (Budget Request)

○ JFY 2019 will be the first year for the new NDPG and MTDP (to be published by the end of December 2018). The JMOD will establish cross-domain (including new domains such as space, cyber, and electromagnetic spectrum), joint operational defense capability, and will also strengthen human foundation and technological bases.

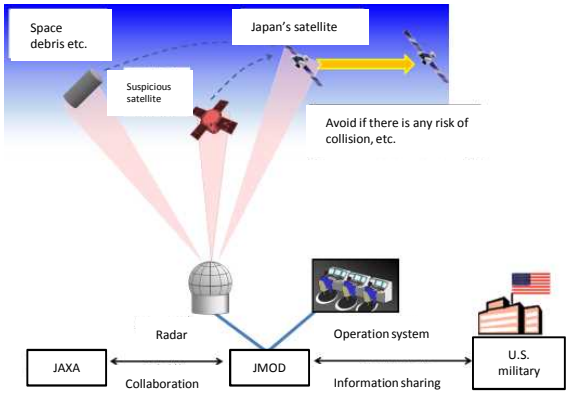
○ Strengthening Capabilities in New Domains

(Space)

☐ Development of Space Situational Awareness (SSA) System (¥26.8 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



SSA System and its Operation (conceptual image)

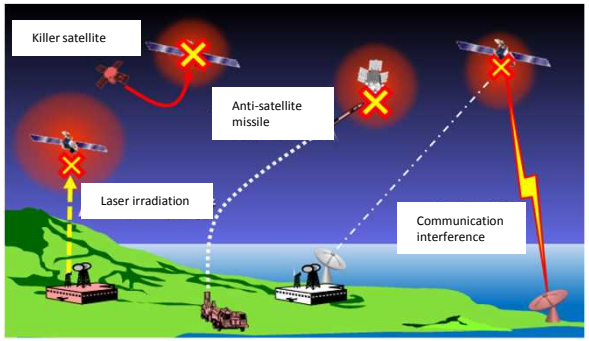
☐ Research and Study for Strengthening the C4ISR (※) Functions by Utilizing Space (¥180 Million)

・ 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.



Threat against Stable Use of Outer Space (conceptual image)

Major Programs in JFY2019 Defense Budget (Budget Request)

(Cyber)

☐ Enhancement and Strengthening of Cyber Defense Group

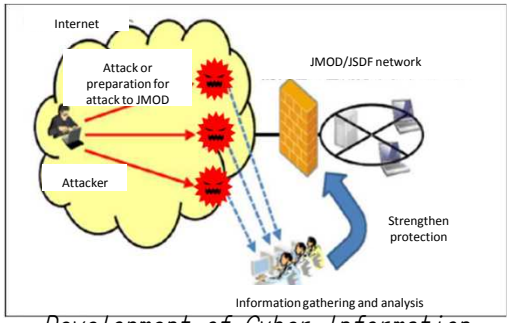
・ Cyber Defense Group will be expanded approximately from 150 to 220 personnel in order to strengthen the initial and the advanced response capabilities and enhance realistic training for responding to cyber attacks.

☐ Procurement of Cyber Information Gathering Devices (¥3.8 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.

☐ Utilization of External Capabilities Related to Response to Cyber Attacks (¥2.4 Billion)

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



Development of Cyber Information Gathering Devices (conceptual image)

(Electromagnetic Spectrum)

☐ 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 (¥20 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 JFY2019 Defense Budget (Budget Request)

○ Strengthening Capabilities in Sea and Air Domains

☐ Procurement of F-35A (6 Aircraft: ¥91.6 Billion)

☐ Upgrade of F-15 (2 Aircraft: ¥10.1 Billion)

※ Excluding ¥43.9 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.

Fighter Jets (F-35A)

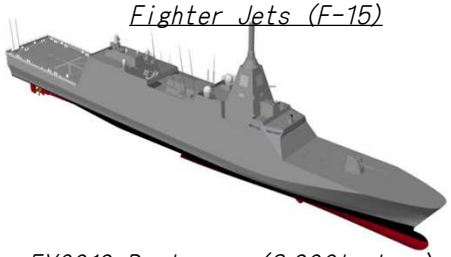
Standoff Missile

Fighter Jets (F-15)

☐ Procurement of Long-Endurance UAV (RQ-4B Global Hawk): (¥8.1 Billion)

☐ Construction of Multi-Purpose Compact Destroyer (2 Ships: ¥99.5 Billion)

・ Construction of 2 destroyers (3,900t class), which can be operated with fewer crews, with compact hulls and improved multi-role capability (such as mine countermeasures, which were traditionally served by minesweeping vessels); bringing the total number of vessels in the Fleet Escort Force to 54.



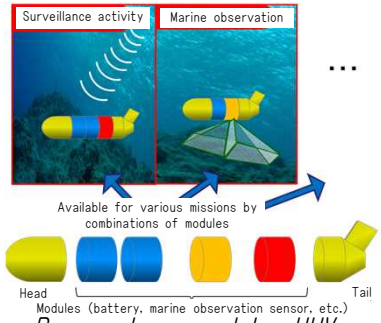
FY2019 Destroyer (3,900t class) (conceptual image)

☐ Construction of Submarine (1 Ship: ¥71.1 Billion)

・ Construct a new submarine (3,000t class) with enhanced capabilities (detection, etc.) to effectively carry out intelligence and surveillance activities in the surrounding sea.

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

・ Conduct research to establish UUV (Unmanned Underwater Vehicle) technology which is available for various missions such as surveillance activities and marine observation, by prototyping a long-endurance UUV which has exchangeable mission modules.



Research on modular UUV (conceptual image)

☐ 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.

Major Programs in JFY2019 Defense Budget (Budget Request)

○ Strengthening Response Capabilities against Ballistic and Cruise Missiles Attacks

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

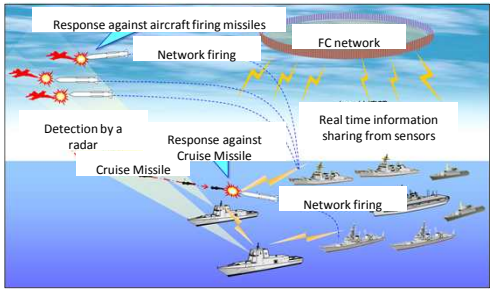
・ Procurement of 2 units of Aegis Ashore with cutting-edge radar (LMSSR) that drastically improve ballistic missile defense capability such as response against lofted trajectory projectiles (procurement cost of 1 unit: ¥123.7 billion).

Accumulated cost※ to JFY2019 budget request: ¥235.2 billion
※ include related costs

Aegis Ashore

☐ Procurement of SM-3 Block IIA and SM-3 Block IB (¥81.8 Billion)

☐ Research on Fire-Control Network that Enables Network Launches through Real Time Sharing of Sensor Information within the Destroyer Fleet (¥6.9 Billion)



Research on FC Network

☐ Procurement of Type-03 Medium-Range Surface-to-Air Missile (Improved Version) (¥13.8 Billion)

○ Strengthening Mobilization/Deployment Capabilities

☐ Training to Enhance/Develop Rapidly Deployable Ground Defense Forces (¥7.4 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: ¥45.7 Billion)

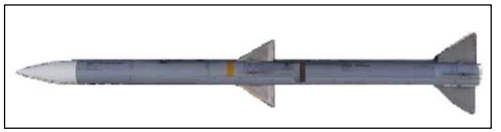
・ Procure transport aircraft that contribute to large scale deployment by improving flight range and payload (※ Cost per aircraft, excluding engine, is ¥16.5 billion compared to ¥17.2 billion of JFY2018 budget (decrease by ¥700 million)).

Transport Aircraft(C-2)

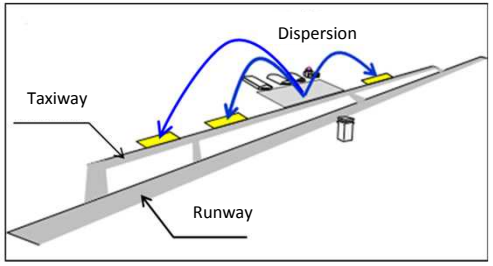
Major Programs in JFY2019 Defense Budget (Budget Request)

○ Strengthening SDF Operational Base

- ☐ **Procurement of Ammunition (Anti-Air Missile, Torpedo) Needed to Secure Air and Sea Superiority (¥57.1 Billion)**
- ☐ **Procurement of Stand-off Missile (JSM) (¥7.3 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: ¥5.5 Billion)**
- ☐ **Secure necessary budget for Maintenance to Improve Equipment Operational Availability (¥883.5 Billion)**
- ☐ **Establishment of Specialized Division to Introduce Artificial Intelligence (AI) to the Ministry**



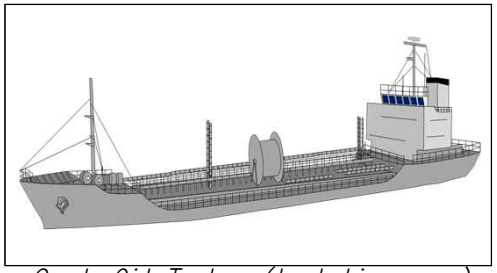
Ammunition (AIM-120)



Development of Dispersion Pads (conceptual image)

○ Strengthening Human Foundation

- ☐ **Work Experience through Virtual Reality (VR) (¥30 Million)**
- ☐ **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 (¥3.3 Billion)**
  - ・ Install female-only sections in barracks and ships, improve living and working environments, and develop education and training foundations for female personnel in order to recruit, retain and promote female personnel.
- ☐ **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)

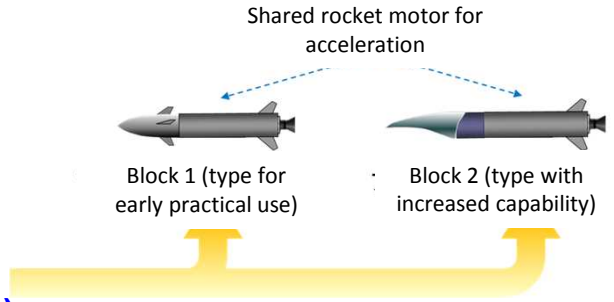
Major Programs in JFY2019 Defense Budget (Budget Request)

○ Strengthening Technological Bases

(Promotion of R&D for Early Practical Use)

☐ Research on HVGP (Hyper Velocity Gliding Projectile) for Defense of Remote Islands (¥13.8 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.

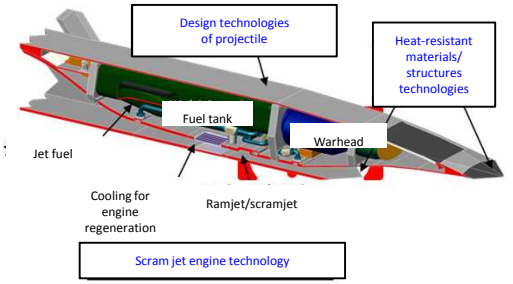


Stepwise Development of HVGP for Defense of Remote Islands (conceptual image)

(Promotion of Strategic Effort to Ensure Technological Superiority)

☐ Research on Component Technologies of Hypersonic Cruise Weapons (¥6.4 Billion)

・ Conduct research on component technologies of engines using combustion in supersonic air flow, 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 Optimal Procurement through Project Management)

☐ Research on Mission System Integration of Fighters and Others (¥7.9 Billion)

・ Conduct research on the integration technology of the mission system, which is a basis for operation/mission execution capabilities, to control mission system freely 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 (¥1.4 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 (International 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 Maintain the Visibility Over the Entirety and Shortcoming of the Supply Chain (¥1.4 Billion)

Request for JFY2019 Tax Reform (Budget Request)

○ 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.

The JMOD requests for the application of special measures for tax exemption in the same manner when providing tax-exempt light oil based on a new ACSA if it is concluded hereafter.

Providing Light Oil to the Foreign Military Vessel at Sea

○ Expansion of Special Deduction of Corporate Tax, etc. when Conducting Experimental Research (Joint Request: Ministry of Economy, Trade and Industry (METI), etc.)【Income Tax/Corporation Tax/Corporate Inhabitant Tax】

☐ The JMOD requests an increase in the maximum deduction cost of total-amount-type (including tax system for strengthening the technological bases of small and medium-sized enterprises (SMEs)) as well as a raise in the deduction rate in the case of cooperative research with venture enterprises, in order to strengthen incentives to invest in research and development, etc.

○ Establishment of Tax Exemption Measures for the Australian Defence Force based on an Agreement Concerning Reciprocal Access Agreement between Japan and Australia (tentative name) (Joint Request: Ministry of Foreign Affairs (MOFA))【Multiple Taxes 】

☐ The MOFA and JMOD jointly request for the establishment of tax exemption measures because an agreement currently being negotiated concerning the facilitation of reciprocal access between Japan and Australia (tentative) could include tax exemption clauses for the Australian Defense Force (ADF) when importing items in case Japan accepts ADF as visiting force under this agreement. (Note: Such tax exemption is stipulated in a similar type of agreements that Australia has concluded with other countries.) There is a possibility that this agreement could be signed by the end of JFY2019.