防衛省

Ministry of Defense

Defense Programs and Budget of Japan

Overview of FY2019 Budget

Blank

Defense Programs and Budget of Japan

Overview of FY2019 Budget

– Contents –

Blank

Concept of FY2019 Budget Request

1. Japan will steadily improve its defense capabilities in FY2019 as the first year of the "Medium Term Defense Program (FY2019 – FY2023)" (MTDP) (approved by the Cabinet on December 18, 2018) based on the "National Defense Program Guidelines for FY2019 and beyond" (approved by the Cabinet on December 18, 2018) in order to build a truly effective defense capability, "Multi-Domain Defense Force".

2. In order to realize cross-domain operations, Self Defense Force (SDF) will acquire and strengthen capabilities in new domains, which are space, cyberspace and electromagnetic spectrum by focusing resources and leveraging Japan's superb science and technology. In addition, SDF will enhance capabilities in maritime and air domains, stand-off defense capability, comprehensive air and missile defense capability and maneuver and deployment capability to effectively respond to various situations during cross-domain operations in close combination with capabilities in new domains. Furthermore, to be able to sustain a range of requisite activities at all stages from peacetime to armed contingencies, sustainability and resiliency of defense capability including logistics support will be enhanced. Moreover, Japan will prioritize reinforcement of human resource base in the face of aging population with declining birth rates and technology base regarding advances in military technology, as well as strengthening Japan-U.S. Alliance and security cooperation with other countries in light of changes in security environment.

3. In order to adapt to increasingly rapid changes in security environment, Japan will strengthen its defense capability at speeds that are fundamentally different from the past. Japan will strengthen its defense capability effectively by allocating resources flexibly and intensively without adhering to existing budget and human resource allocation. Furthermore, SDF will further promote joint-ness of the Ground, Maritime and Air Self-Defense Forces in all areas, avoid stove-piped approach and optimize their organizations and equipment.

4. Considering increasingly severe fiscal conditions and importance of other budgets related to people's daily life, Japan will work to achieve greater efficiency and streamlining through various measures to streamline procurements while harmonizing with other policies and measures of the Government.

I Defense-Related Expenses

Overall Defense-Related Expense

(Unit: ¥100 million)

Categories	FY2018 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 (%).
2. Figures may not add up to the total due to rounding (the same hereafter).
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.
   The amount of the SACO-related expenses are:
   FY2018: ¥5.1 billion; FY2019: ¥25.6 billion
   The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:
   FY2018: ¥216.1 billion; FY2019: ¥167.9 billion
   Expenses related to the introduction of new government aircraft are:
   FY2018: ¥31.2 billion; FY2019: ¥6.2 billion
   Expenses related to the three-year emergency measures for disaster prevention/reduction and national resilience are:
   FY2018: ¥100 million; FY2019: ¥50.8 billion
4. Exchange rate for FY2019 defense budget request: US$ = JPY110.

【Future Obligation Concerning New Contracts】

(Unit: ¥100 million)

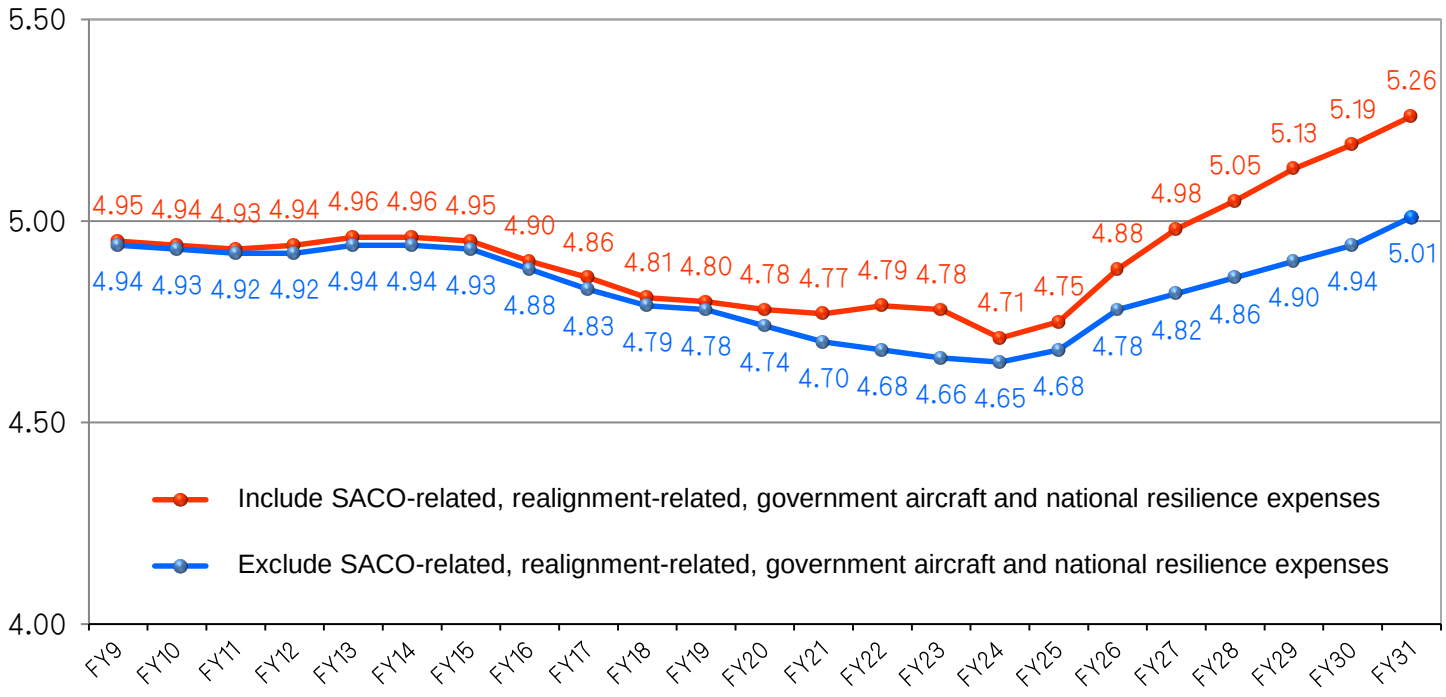
Categories	FY2018 Budget	Year on Year Change	FY2019 Budget	Year on Year Change
Total	19,938 (21,164)	238[1.2] (△135[△0.6])	24,013 (25,781)	4,074[20.4] (4,617[21.8])
Conventional portion	19,666	519[2.7]	22,121	2,455[12.5]
Long-term contracts	272	△281[△50.8]	1,892	1,620[594.9]

(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.
   The amount of the SACO-related expenses are:
   FY2018: ¥6.5 billion; FY2019: ¥5.5 billion
   The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:
   FY2018: ¥109.9 billion; FY2019: ¥160.1 billion
   Expenses related to the introduction of new government aircraft are:
   FY2018: ¥6.2 billion; FY2019: ¥100 million
   Expenses related to the three-year emergency measures for disaster prevention/reduction and national resilience are:
   FY2018: ¥100 million; FY2019: ¥11.3 billion
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)

Transition of the Defense-Related Expenses

Transition of the Total Amount

(Unit:¥1 trillion)



Transition of the Growth Rate

(Unit: %)

Categories	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07
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
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

Categories	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
Include SACO-related, realignment-related, government aircraft and national resilience expenses	△ 0.5	△ 0.1	△ 0.3	△ 0.3	△ 1.3	0.9	2.8	2.0	1.5	1.4	1.3	1.3
Exclude SACO-related, realignment-related, government aircraft and national resilience expenses	△ 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.

Notes 1: Numbers in the text represent expenses, excluding non-recurring costs, that are required for the production of equipment, unless otherwise specified.
2: Numbers in the text are on a contract base, unless otherwise specified.
3: Blue text indicates new programs.

Ⅱ Priorities for Strengthening Capabilities Necessary for Cross-Domain Operations

Japan will build a defense capability, 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, as security environment surrounding Japan becomes more testing and uncertain at remarkably fast speeds.

1 Acquiring and Strengthening Capabilities in Space, Cyber and Electromagnetic Domains

In order to realize cross-domain operations, SDF will acquire and strengthen capabilities in new domains, which are space, cyberspace and electromagnetic spectrum by focusing resources and leveraging Japan's superb science and technology.

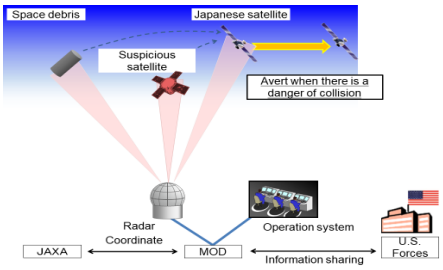
Space-related budget: ¥86 billion *

* Excluding the portion related to ballistic missile defense allocated for space.

(1) Capabilities in Space Domain

○ Procurement of the Space Situational Awareness (SSA*) system (¥26.0 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).

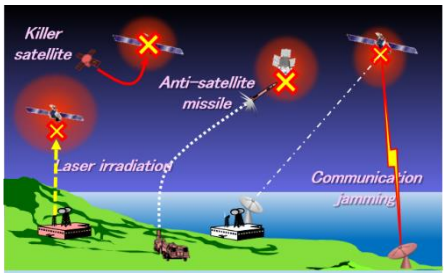
* SSA: Space Situational Awareness
* Deep Space: outside of the altitude of approximately 5,800km



SSA System and its Operation (conceptual image)

○ Research and study for strengthening the C4ISR* functions by utilizing space (¥2 billion)
- Verification study of dual-band infrared sensor in space.
- Research and study on the space electromagnetic spectrum surveillance posture.
- Research and study on the vulnerabilities of satellites and their countermeasure.
- Research and study to secure stable utilization of outer space.

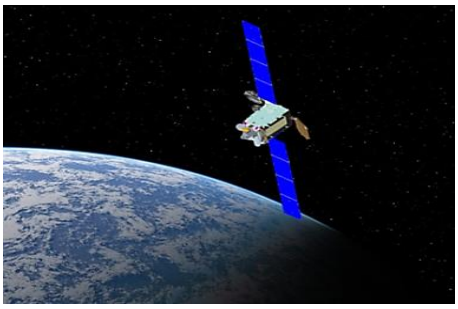
* C4ISR: Command, Control, Communication, Computer, Intelligence, Surveillance, Reconnaissance



Threat against Stable Use of Outer Space (conceptual image)

○ Research and study on SSA capability enhancement, including space-based optical telescope (¥30 million)

○ Use of satellite communication (¥51.2 billion)
- Partial development such as equipment related to the X-band Defense Communication Satellite-3 (successor satellite of Superbird-C2).
- Modification to equipment, etc. to adapt to the X-band communication satellite.
- Leasing of commercial communication satellite lines, development and maintenance, etc. of satellite communication equipment.



X-Band Defense Communication Satellite (conceptual image)

○ Use of commercial imagery satellites/meteorological satellites information (¥10.4 billion)
- procurement of data for image analysis (WorldView-4, domestic commercial optical satellite, miniature earth observation satellite, etc.).

○ Dispatch of personnel to the U.S. Air Force Space Operations Course, etc. (¥20 million)
- Acquire knowledge concerning matters related to outer space by dispatching personnel to the Space Operations Course provided at U.S. Air Force base in the U.S. state of Colorado.
- Participate in multilateral table-top exercises in the field of outer space.

○ Establish “Space and Maritime Policy Office (tentative name)”in the Strategic Planning Division of Bureau of Defense Policy to strengthen the policy planning function related to the stable use of outer space and maritime policy in the JMOD/SDF as well as coordination with other ministries and agencies.

* Budget related to BMD (only the space-related portion): ¥270.5 billion

(2) Capabilities in Cyber Domain

Cyber-related budget: ¥22.3 billion

○ Enhancement/strengthening of cyber postures

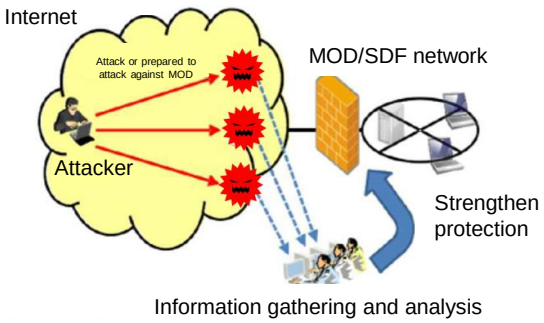
Enhancement/strengthening of Cyber Defense Group (approx. 150 → approx. 220 personnel)

Increase the number of Cyber Defense Group by approximately 70 personnel to fundamentally strengthen cyber defense capability.

Enhancement/Strengthening of Posture (conceptual image)

○ Improvement of the Defense Information Infrastructure (closed) (¥11 billion)
Improve the closed system of the DII to prevent cyber attacks by intruders.

○ 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)

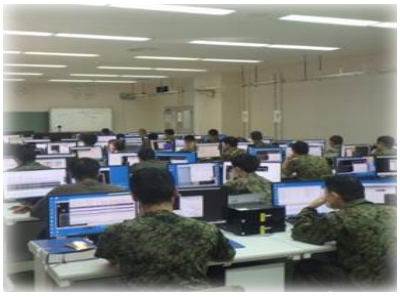
○ Utilization of outside expertise related to response to cyber attacks (¥2.3 billion)
Utilization of outside expertise for tasks that require advanced expertise on response to cyber attacks.

○ Enhancement of cyber security measures of the air operation system (¥440 million)
Develop security surveillance equipment to quickly detect and appropriately respond to cyber attacks, etc. against the operation system of the JASDF.

Operation System Security Surveillance Equipment (conceptual image)

○ Implementation of common cyber course (¥50 million)
Develop personnel specialized in the cyber field by offering common and advanced knowledge/skills concerning cybersecurity as common education for respective SDF services.

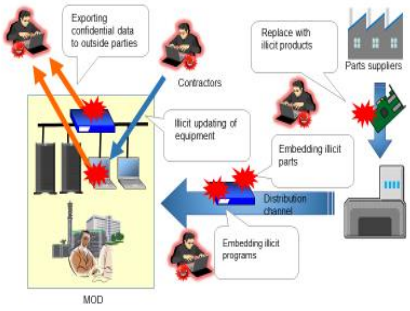
○ Participation in international training, etc related to cyber security (¥50 million)
In order to improve response capabilities against cyber attacks, acquire cutting-edge skills, etc. through participation in international training, etc.



Implementation of Common Cyber Course (conceptual image)

○ Research on countermeasures for supply-chain risk* (¥90 million)
Conduct investigations and research on methods and countermeasures to detect and remove attacks such as chips and software illegally embedded in the supply-chain.

* Supply-chain risk: Risks involved in the whole lifecycle of information systems and equipment, including operation, maintenance and disposal, as well as development and production prior to delivery.



Supply-Chain Risk with Information System (conceptual image)

(3) Capabilities in Electromagnetic Spectrum Domain

○ Establish “Electromagnetic Spectrum Policy Office (tentative name)” in the Information and Communications Division of the Bureau of Defense Buildup Planning to enhance the function to make policies pertaining to effective and efficient use of electromagnetic spectrum in the JMOD/JSDF and coordination with other ministries and agencies.

○ Establish “Electromagnetic Spectrum Domain Planning Section (tentative name)” in the C4 Systems Planning Division of the C4 Systems Department in Joint Staff to improve the function to make policies related to integrated operations in the electromagnetic spectrum domain.

○ Research to optimize the management of the electromagnetic spectrum domain (¥3 million)
In order to contribute to the integrated operation crossing multiple domains, conduct research from a technological perspective on information sharing among the three branches of the SDF contributing to the effective use of electromagnetic spectrum.

○ Procurement of F-35A
Continue procurement of fighter jets (F-35A) with high-quality electronic warfare capabilities. *Refer to the page 10 for the details of program in general.

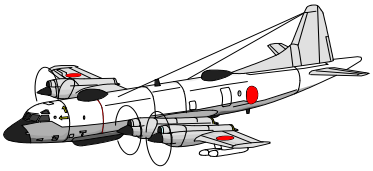
○ Improvement of F-15's electronic warfare (EW) capability
Conduct refurbishment of F-15 fighter jets to load new electronic warfare devices with ability to respond to increased capabilities of neighboring countries' air forces.
* Refer to the page 10 for the details of program in general.

Improvement of Electronic Warfare Capability for F-15 Fighter Jets

○ Procurement of network electronic warfare system (1 set: ¥2.6 billion)
Improve the GSDF's network electronic warfare system to have an advantage in operations by collecting and analyzing signals and jamming communication.

Network Electronic Warfare System

○ Refurbishment of the airframe of utility aircraft (UP-3D) (¥1.5 billion)
Refurbish the airframe of the UP-3D and equip it with an improved jammer to support training based on trends in electronic warfare in recent years.



UP-3D (utility/training support aircraft)

○ Improvement of sharing/processing capability of Electronic Warfare information of the Japan Aerospace Defense Ground Environment (JADGE) (¥2.9 billion)
Provide the JADGE electronic warfare data retained by SDF units to improve information sharing on the electromagnetic spectrum.

Improvement of JADGE Capability (conceptual image)

2 Enhancing Capabilities in Traditional Domains

SDF will enhance capabilities in maritime and air domains, stand-off defense capability, comprehensive air and missile defense capability and maneuver and deployment capability to effectively counter attacks by aircraft, ships and missiles during cross-domain operations in close combination with capabilities in space, cyber and electromagnetic domains.

(1) Capabilities in Maritime and Air Domains

Strengthening a Posture for Persistent ISR (intelligence, surveillance and reconnaissance)

○ Capability improvement of fixed-wing patrol aircraft (P-3C) (¥30 million)
Implement upgrades necessary to improve capabilities of the radars to improve the detection/discernment capabilities of the fixed-wing patrol aircraft (P-3C).

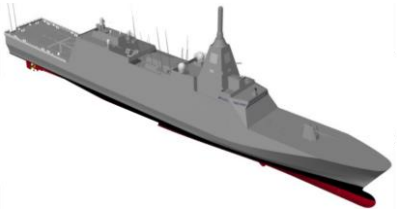
Fixed-Wing Patrol Aircraft (P-3C)

○ Life extension of fixed-wing patrol aircraft (P-3C) (5 aircraft: ¥2.2 billion)
Implement life extension measures for P-3C to maintain the number of fixed-wing patrol aircraft.

○ Life extension of patrol helicopters (5 aircraft: ¥7.7 billion)
Implement life extension measures for three SH-60K and two SH-60J to maintain the number of patrol helicopters.

Patrol Helicopter (SH-60K)

○ Construction of destroyer (2 ships: ¥95.1 billion)
Construct 2_destroyers (third and fourth ships of FFM (3,900t class) built in FY2018), equipped with compact hulls and improved multi-role capability (such as mine countermeasures, which were conventionally served by minesweeping vessels); bringing the tota number of destroyers to 54..



FY2019 FFM(3,900t) (conceptual image)

○ Life extension of destroyers (life extension for 3 ships and parts procurement for 4 ships: ¥6.2 billion)
Implement life extension measures for the Asagiri-class (3 ships), Abukuma-class (1 ship), Kongo-class (2 ships), and Murasame-class (1 ship) to maintain the number of destroyers.

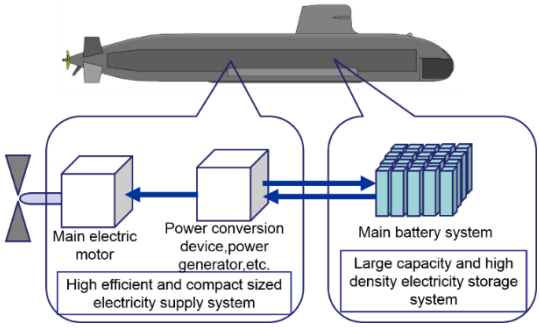
○ Construction of a submarine (1 ship: ¥69.8 billion)
Construct a submarine (third ship of new class ship (3,000t class) built in FY2017) with enhanced capabilities (detection, etc.) to effectively carry out intelligence and surveillance activities in the surrounding sea with 22 submarines.

FY2019 Submarine (3,000t) (conceptual image)

○ Life extension of submarines (life extension for 4 vessels and parts procurement for 3 vessels: ¥6.3 billion)
Implement life extension measures for Oyashio-class submarines; bringing the total number of submarines to 22 from 16.

Oyashio-Class Submarine (2,700t)

○ Research on high-efficient electricity storage and supply system for submarines (¥4.3 billion)
Conduct research on high-efficient electricity supply system and high-density electricity storage system to extend submarines' underwater endurance without increasing ship size.



High Efficient Electricity Storage and Supply System for Submarines (conceptual image)

○ Procurement of long-endurance UAV (RQ-4B Global Hawk): (¥7.1 billion)
- Accumulate expenses for the assembly of one UAV in order to enhance persistent wide-area surveillance capability.

* ¥10.1 billion is accumulated separately for other related expenses (maintenance equipment, etc.).

Long-Endurance Unmanned Aerial Vehicle (RQ-4B Global Hawk) (picture of the same vehicle type)

○ Procurement of airborne early-warning aircraft (E-2D) (9 aircraft: ¥194 billion)
Bulk-procurement of airborne early-warning aircraft to strengthen ISR capabilities in airspace around Japan including vast air space on the Pacific side.

Airborne Early-Warning Aircraft (E-2D)

○ Capability improvement of Airborne Warning and Control System (E-767) (1 aircraft: ¥12.9 billion)
Implement aircraft modifications necessary for conversion of central computing devices and installation of electronic warfare support equipment in order to improve the warning and surveillance capabilities of the existing E-767.

Airborne Warning and Control System (E-767)

○ 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.

Establishment of Airborne Warning and Control Wing

○ Linkage of the radar on Iwo To to JADGE, etc. (¥100 million)
Improve the ISR capabilities in the airspace over Iwo To and its vicinity by connecting the radar on the island (FPS-2) to JADGE.

Radar on Iwo To (FPS-2)

Obtaining and Maintaining Air Superiority

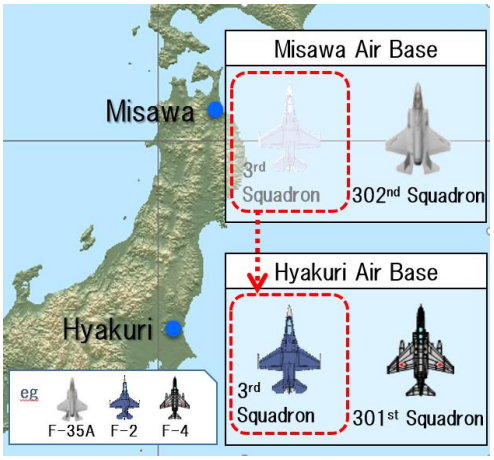
○ Procurement of F-35A (6 aircraft: ¥68.1 billion)
* ¥40.7 billion is accumulated separately for other related expenses (ground support equipment, etc.).

Fighter Jets (F-35A)

○ Upgrade of F-15 (2 aircraft: ¥10.8 billion)
Upgrade to load standoff missiles (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.
- ¥41.2 billion is accumulated separately for other related expenses (design changes, etc.).

Fighter Jets (F-15)

○ Shifting the posture of fighter squadrons, etc.
- Shift the posture of fighter squadrons to develop readiness for ensuring air superiority.
- Move the F-2 squadrons at Misawa Air Base to Hyakuri Air Base.



Shifting the Posture of Fighter Squadrons

○ 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.

Izumo-Class Destroyer

○ Procurement of Type-03 middle-range surface-to-air missile (modified) (1 set: ¥14.1 billion)
Procure the Type-03 medium-range surface-to-air missile (modified) with enhanced capability to respond to low-altitude and high-speed targets in order to strengthen air defense capability.

Type-03 Middle-Range Surface-to-Air Missile (modified)

○ Procurement of Type-11 short-range surface-to-air missile (1 set:¥4.7 billion)
Procure the Type-11 short-range surface-to-air missile, which is capable of responding to various airborne threats, in order to strengthen the capability to provide air defense for rapid deployment units, etc.

Type-11 Short-Range Surface-to-Air Missile

Obtaining and Maintaining Maritime Superiority

○ Capability improvement of fixed-wing patrol aircraft (P-3C) (repost)

○ Life extension of fixed-wing patrol aircraft (P-3C) (repost)

○ Life extension of patrol helicopters (repost)

○ Construction of destroyer (repost)

○ Life extension of destroyers (repost)

○ Construction of a submarine (repost)

○ Life extension of submarines (repost)

○ Research on UUV* (¥4.2 billion) with an convertible mission modules
Conduct research to establish UUV technology which is applicable to various missions such as marine surveillance and observation, by prototyping a UUV with exchangeable mission modules which can be operated long term.
* UUV: Unmanned Underwater Vehicle

○ Research on high-efficient electricity storage and supply system for submarines (repost)

○ Procurement of Type-12 surface-to-ship missile
(1 set: ¥ 13.5 billion)
Procure Type-12 surface-to-ship missile, an upgraded version of the existing Type-88 surface-to-ship missile, to enhance combat capabilities against ships.

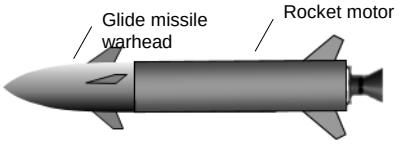
Type-12 Surface-to-Ship Missile

(2) Stand-off Defense Capability

○ Procurement of stand-off missiles (¥7.9 billion)
Procure stand-off missiles (JSM), which can be loaded on the F-35A and are capable of responding from the outside of their threat envelopes to deal with ships and landing forces attempting to invade Japan while ensuring safety of SDF personnel.

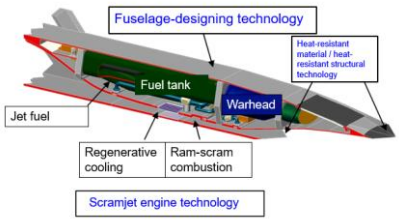
Stand-Off Missile (JSM) (conceptual image)

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



HVGP for Defense of Remote Islands (conceptual image)

○ Research on component technologies of hypersonic weapons (¥5.8 billion)
Conduct research on component technologies of SCRAM-jet engines using combustion in supersonic air flow , to realize propulsion device which is capable of cruising in hypersonic* environment.
* Scramjet engine: An engine utilizing the combustion in the sonic speed airflow
* Hypersonic speed: five times faster than the speed of sound



Research on Element Technologies of Hypersonic Weapons (conceptual image)

(3) Comprehensive Air and Missile Defense Capability

BMD-related budget: ¥355 billion

○ Introduction of the 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 request: ¥175.7 billion
* include related costs

Aegis Ashore

○ Procurement of SM-3 Block IIA and SM-3 Block IB (¥71.7 Billion)

Procure SM-3 Block IIA and SM-3 Block IB to be deployed for ballistic missile defense.
(* SM-3 Block IB will be bulk-procured)

SM-3 Block ⅡA

○ Capability improvement of the Atago-class destroyers (¥7.5 billion)

- Implement upgrades to enable them to launch the SM-3 Block IIA.

○ Modification to the Patriot system (¥20.1 billion)

- In order to maintain and improve the BMD and air defense capabilities, implement upgrades to the Patriot system (¥11.3 billion).
- Secure necessary PAC-3 missiles by replacing parts that are close to the end of their service life and inspecting the whole missile as part of the reassuring process of the PAC-3 missiles. (¥8.8 billion).

○ Procurement of Type-03 middle-range surface-to-air missile (modified) (repost)

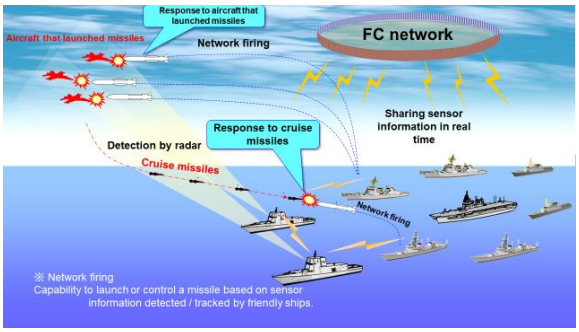
○ Procurement of Type-11 surface-to-air missile (repost)

○ Procurement of air defense command and control system (2 sets: ¥7.3 billion)

Procure the air defense command and control system to ensure effective joint response operations against airborne threats.

Air Defense Command and Control System

○ Research on FC Network (¥6.3 billion)
Research on FC (Fire Control) Network that enables real time sharing of sensor information within destroyers and Network Launches.



FC Network (conceptual image)

○ BMD exercise
Improves SDF's capabilities of BMD response and enhances operational coordination with U.S. Forces.

BMD Training (conceptual image)

(4) Maneuver and Deployment Capability

○ Procurement of Type-16 mobile combat vehicles (22 vehicles: ¥16.1 billion)
Strengthen rapid deployment capabilities of the basic operational units (rapid deployment division and rapid deployment brigades) by deploying Type-16 mobile combat vehicles suited for transportation by aircraft and other mean.

Type-16 Mobile Combat Vehicle

○ Procurement of 155mm wheeled howitzer (7 vehicles: ¥5.1 billion)
As the successor of the existing 155mm field howitzer (FH70), procure the 155mm wheeled howitzer for training purpose, which is capable for the operation with quick and maneuver in various situations and can be also contributed for its efficiency.

155mm Wheeled Howitzer (proto type)

○ Development of multi-purpose missile system (improved) (¥3.5 billion)
Develop a multi-purpose missile system with higher capability and performance compared to the existing equipment, such as a longer range and better capability to simultaneously response to multiple targets, at a lower procurement cost.

Multi-Purpose Missile System (modified) (picture is the existing equipment)

○ Prototypes vehicles of newly introduced candidates of the next wheeled armored vehicle (¥2.1 billion)

Expenses related to the procurement of the prototype vehicles to be used for the test and evaluation required for the selection of the next wheeled armored vehicle.

○ Procurement of new utility helicopter (UH-X) (6 aircraft: ¥11 billion)

Procure new utility helicopter (UH-X) for rapid deployment through airmobile and airlift, to succeed the utility helicopter (UH-1J).

New Utility Helicopter (UH-X) (conceptual image)

○ Development of facilities related to the Amphibious Rapid Deployment Brigade (Ainoura, etc.) (¥500 million)

○ Development for an area security unit in the southwestern region (19.7 billion)

In order to improve the initial response readiness in the defense of remote islands, allocate budget related to the development of training facilities and others associated with unit deployment on Amami-Oshima and Miyako-jima and expenses necessary for preparing construction design on Ishigaki-jima.

Key Facilities associated with Unit Deployment (conceptual image)

○ Procurement of transport aircraft (C-2) (2 aircraft: ¥45.3 billion)

In view of the decreasing number of the current transport aircraft (C-1), 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)

○ Enhancement of readiness for joint transportation using PFI ships

Enhance the readiness for joint transportation by improving the operational effectiveness of PFI ships through the implementation of an exercise using such ships to transport units and equipment and verification of port entry.

Joint Transportation using PFI Ships

○ Training to Enhance/Develop Rapidly Deployable Ground Defense Forces (¥7.5 Billion)
Maintain/improve unit readiness, demonstrates its presence even in peacetime~~,~~ and strengthen~~s~~ deterrence/response capability by conducting effective training at various environments in both domestic and international locations mainly focused on the ~~for~~ Amphibious Rapid Deployment Brigade and Deployment Division/Brigade.

～Various Exercises～

- Mobility Exercises (¥1.1 billion)
Improves SDF's response capabilities to various situations through refining operational coordination between the ASDF and the MSDF required for rapid.

Mobility Exercise

- Exercises involving the Amphibious Rapid Deployment Brigade (¥200 million)
Strengthens the readiness of the Amphibious Rapid Deployment Brigade through loading training on both the MSDF's ships and remote islands.

Exercise involving the Amphibious Rapid Deployment Brigade

- Field Training Exercises with the U.S. Marine Corps in the U.S., as well as other countries. (¥6.2 billion)
(Iron Fist, Kamandag, Talisman Saber, etc.)
Enhances bilateral response capabilities with the U.S. and others through exercises in the U.S. Aimed at improving tactical skills and interoperability necessary for operations in remote islands.

Iron Fist

○ Joint Amphibious Operation Exercise
Conduct ~~A~~ joint amphibious operation exercise to enhance the SDF's joint amphibious operation capabilities and bilateral response capabilities with U.S. Forces.

Joint Amphibious Operation Exercise

3 Strengthening Sustainability and Resiliency

In order to be able to operate units continuously at all stages from peacetime to armed contingencies, SDF will promote measures necessary for securing ammunition and fuel and protecting infrastructure and other foundations for SDF operations. Moreover, in order to swiftly and effectively respond to various situations, MOD/SDF will promote measures to ensure high operational availability of equipment.

(1) Securing Continuous Operations

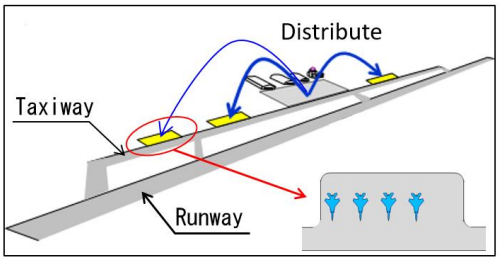
○ Procurement of ammunition that contributes to air superiority and provides effective response to threats as well as torpedoes needed to secure sea superiority (¥45.5 billion)

Ammunition (AIM-120)

○ Procurement of stand-off missile (repost)

○ Procurement of SM-3 Block IIA and SM-3 Block IB(repost)

○ Development for dispersion pads (¥20 million)
Development for dispersion pads at air bases for enhancing resiliency.



Dispersion Pads

○ Procurement of equipment necessary to improve the capabilities to restore damaged runways (¥900 million)
Procure equipment which enables a faster restoration of damaged runways of an airbase.

Equipment to Restore Damage in Runways

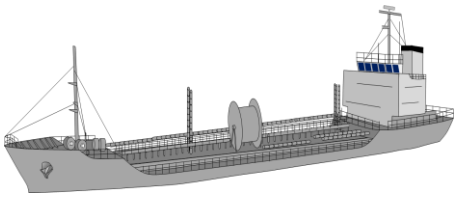
○ Establishment of Maritime Operation Center (*)
In order to establish postures to respond to various situations smoothly in collaboration with the GSDF/ASDF, U.S. Forces as well as other related ministries and agencies should establish a Maritime Operation Center in the Funakoshi area in Yokosuka.

○ Construction of ammunition storage
Construct new ammunition storage
- Oita Ammo Branch Depot (¥700 million)
- Setouchi Sub-camp (tentative name) (¥1.8 billion)

Ammunition Storage

(*) is accumulated to FY2918 supplementary budget.

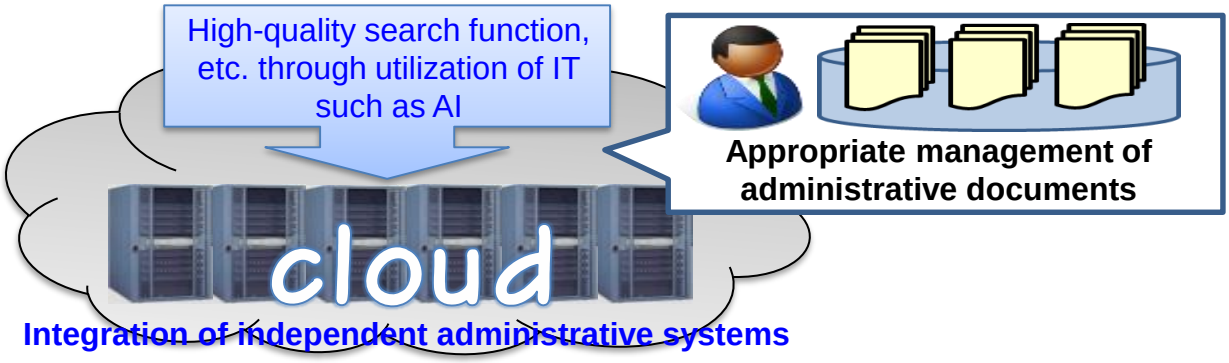
○ Procurement of crude oil tanker (tentative name) (2 ships: ¥5.7 billion)
Procurement of crude oil tanker to ensure support capability of JMSDF vessels.



Oil Tanker (tentative name) (conceptual image)

○ Strengthening of postures for the introduction of AI
To strengthen postures in the whole JMOD/JSDF for the introduction of AI, establish the "AI/Cyber Security Promotion Office (tentative name)" in the Information and Communications Division of the Bureau of Defense Buildup Planning, and create the "AI Planning Section" (tentative name) in the new office.

○ Aim to develop more effective/efficient cloud environment through integrating administrative systems, which has been developed independently, and conduct a study/consideration including utilization of IT such as AI to develop a system with high-quality search function, etc. (¥100 million)



Integration of Administrative Systems (conceptual image)

○ Upgrade of aging SDF facilities (¥37 billion)
Ensure the SDF's stable operational readiness by renovating SDF facilities such as office buildings and barracks, which undermine operations of the SDF.

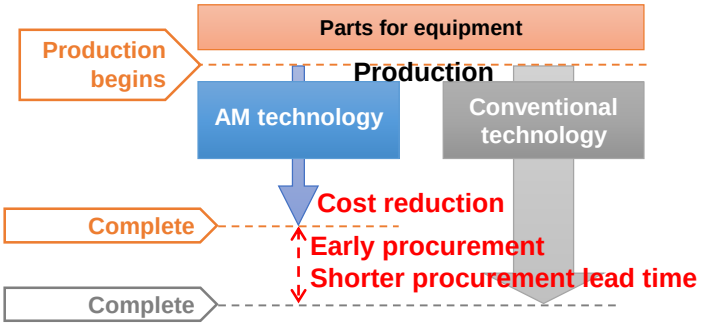
* Including the promotion of aseismic construction to maintain and enhance their functions in the event of a disaster.

SDF Facility

(2) Ensuring Operational Availability of Equipment

○ Maintenance to improve the equipment operational availability ratio (¥895.3 billion)
* ¥40.1 billion increase from FY2018

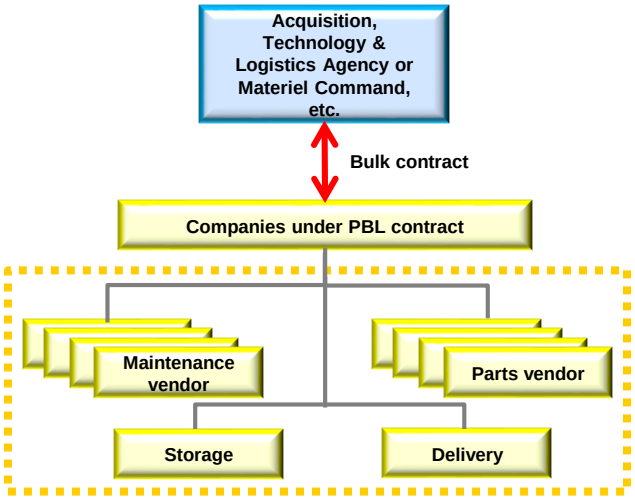
○ Research on the use of Additive Manufacturing (AM) technology in equipment maintenance
Improving equipment availability ratio by reducing the procurement lead time and cost, and preventing DMSMS through the use of the latest production technology, which expands the possibilities of part procurement for maintenance (¥10 million).



Use of AM Technology (conceptual image)

○ Study on compatibility of parts
Conduct study on compatibility between domestic parts and that of overseas to expand suppliers of parts, for improving equipment operational availability ratio (¥40 million)

○ Reduction in procurement lead time through the use of PBL (Performance Based Logistics) contracts
Realize a timely supply of parts through PBL contracts, in which contract procedures are no longer required for every procurement, and estimating demands and controlling inventory that are left at the discretion of suppliers, while also taking advantage of global supply chains.



PBL (conceptual image)

Ⅲ Priorities in Strengthening Core Elements of Defense Capability

As equipment becomes more advanced and complex and missions become more varied and internationalized against the context of the rapidly shrinking and aging population with declining birth rate, MOD/SDF will strive to secure diverse, high-quality talents from a wider range of people and also promote initiatives on a priority base towards the establishment of an environment that enables all SDF personnel to maintain high morale and continue to fully exercise ability. Moreover, to reinforce technological base that has bearing on defense equipment by leveraging Japan's superb science and technology, as character of warfare changes dramatically due to advances in military technologies, Japan will promote measures to shorten research and development timelines and to obtain technological superiority, and improve cost-effectiveness through measures such as strengthening project management, to efficiently secure defense capability in necessary and sufficient "quality" and "quantity".

1 Reinforcing Human Resource Base

(1) Promotion of Measures to Secure Highly-Qualified Personnel

Enhancement of Recruitment Programs

○ Recruitment advertising videos (¥200 million)
Promote recruitment advertisement targeted at potential applicants from various angles by creating recruitment advertising videos and strengthening the lineup of recruitment advertising media.

【Recruitment advertising videos】

〖LIFE　HACK〗

○ Enhancement of recruiting systems
Establish "Recruitment Promotion Office (tentative name)" in the Human Resources Development Division of the Bureau of Personnel and Education to work on strengthening collaboration with local public entities and other ministries and agencies.

Enhancement of Re-employment Support Programs

○ Establishment of vocational training programs (¥10 million)
- Create new subjects related to the acquisition of the drone operator's license in order to expand the occupational field of reemployment to include the drone operators field, which is anticipated to grow in demand in the fields of disaster prevention, security and surveying.

- Create new subjects related to the acquisition of career consultant qualifications in order to expand the occupational field of reemployment to include administration and personnel divisions of private companies.

○ Expansion of prep course for civil service exams (¥10 million)
Create more seats in courses intended for uniformed SDF personnel serving under the fixed-term system who wish to get another civil service job, such as police officers and fire fighters, after their term is complete.

○ Support for uniformed SDF personnel who wish to get a higher education (¥10 million)
Support uniformed SDF personnel serving under the fixed-term system who wish to go to university after their term is complete by providing correspondence education offered by prep schools.


〖A Scene of a Prep Course for Civil Service Exams〗

Improvement of the Sufficiency Ratio of SDF Reserve Personnel

○ Promotion of SDF reserve personnel hired under the public recruitment system to SDF ready reserve personnel (¥60 million)

In addition to former uniformed SDF personnel, who were the only candidates for SDF ready reserve personnel until now, include those of SDF reserve personnel hired under the public recruitment system (promoted from SDF reserve candidates to reserve personnel) who wish to be appointed as SDF ready reserve personnel and have necessary expertise through required education or training to improve the sufficiency ratio.

○ Development of uniforms and accessories, etc. (¥60 million)

In order to improve the effectiveness of SDF reserve personnel, implement developments in uniforms, accessories, as well as containers and shelves to store those.

Improvement of Working Environment

○ Development of new uniform (¥5.2 billion)

To coincide with organizational reforms in the GSDF such as the Ground Component Command established in March 2018, the GSDF's dark green uniform, which was adapted 26 years ago, will be replaced by a new purplish dark blue uniform.

New Uniform

○ Security-of fixtures, daily necessities, etc. to improve living and working environment for SDF personnel (¥2.4 billion)

Renew aged daily life/workplace fixtures and secure daily necessities, etc. so that all the troop members will be able to fulfill their missions with high morale.

○ Upgrade of aging SDF facilities (repost)

Development of Supplies

Others

○ Expansion of the Defense Meritorious Badge Program (¥60 million)

Establish a new class of defense meritorious badge, which is presented to individuals of the SDF, to be given with the 4th (presented by regimental commander) and 5th (presented by company commander) encomium, in addition to the existing classes accompanying the special 1st through 3rd encomiums.

○ Promotion of measures to prevent power harassment

○ Promotion of measures to prevent suicides (¥20 million)

- Use of outside expertise for analysis and suggestions concerning measures to prevent suicides .
- Training by outside professionals for company commanders to improve communication skills.
- Establishment of counselling service using SNS (LINE).

Defense Meritorious Badge

（2）Promote Measures to Ensure Further Participation of Female Personnel and the Work-Life Balance

Further promote greater engagement of female personnel through expanding recruitment and promotion, while implementing and enhancing measures concerning the work-life balance.

○ Female SDF Personnel in Action

Inspection by Female Regimental Commander

First Female Commanding officer of the MSDF Escort Division

First Female Fighter Pilot

Improvement of the Environment for the Working Style Reform (¥70 million)

○ Develop an environment to ensure flexibility in working hours and location
- Provision of terminals for telework.

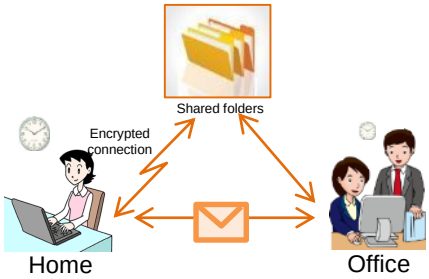


Image of Telework

Improvement of the Working Environment for Female SDF Personnel(¥2.6 billion)

○ Development of facilities for female SDF personnel
- Promote secured sections for female personnel in barracks.
- Make renovations to improve living and working environments for female SDF personnel (renovations of lavatory and bathing facilities).
- Improvement in training foundation for female uniformed SDF personnel.

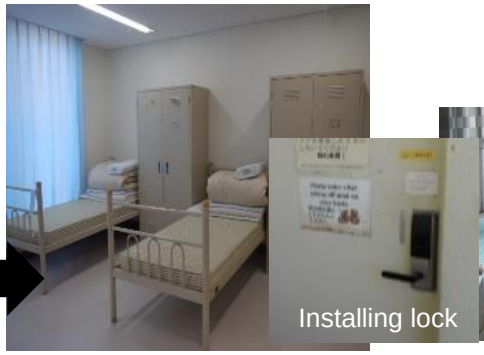


Image after the Renovation

Improvement of Section for Female Personnel

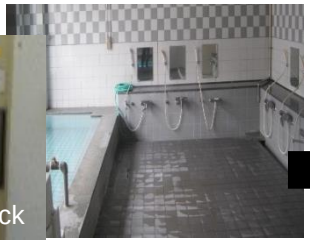


Image after the Renovation

Improvement of Section for Female Personnel

○ Improvement of sections for female personnel on ships (MSDF)

○ Development training for mentors

○ Invite outside counselors for female SDF personnel, etc.

Support for Work-Life Balance(¥100 million)

○ Development of an environment that makes it easy for child-caring personnel to continue working
Introduce a system that enables the use of a sitter service when personnel cannot care for children due to an emergency duty or for other reasons (Ichigaya area).

○ Improvement of workplace nurseries (¥80 million)
Promote workplace nurseries suitable for working patterns particular to SDF so that personnel raising children can engage in their duties without concerns.
- Improvement of workplace nursery (National Defense Medical College).
- Provision of supplies in workplace nurseries.



Workplace Nurseries (conceptual image)

○ Provision of supplies for temporary child-care service in case of emergency operations (¥20 million)
- Provide supplies (safety mats, baby beds, etc.) for temporary child-care service in case of emergency operations (each JSDF).
- Implement temporary child-care service drills, preparing for emergency operations.
- Participate in courses designed to improve child-care skills for temporary child-care service in case of emergency operations (GSDF and MSDF).



A Scene of Temporary Child-Care Drill in Support of Emergency Operations

Promotion of Female Personnel Engagement in International Cooperation, etc.

○ Hold a forum for female SDF personnel and servicewomen from foreign countries

○ Dispatch SDF personnel for training as gender advisors
Send SDF personnel to “Gender Field Advisor Course” (sponsored by the Swedish Armed Forces) in order to introduce the perspective of eliminating gender* disparity in international peace cooperation efforts, etc.


A Scene of The JSDF-USFJ Women's Forum

* Gender: Distinction between men and women formed historically, socially, and culturally, such as the “male image” and “female image,” different from sex that shows the biological difference between males and females.

Implementation of Training and Drills for Raising Awareness (¥30 million)

Effort to eliminate conventional mindset about gender roles in the workplace and develop a work environment that enables all personnel, including those under time restriction due to child-care or nursing care, to demonstrate their full potential.

○ Hold seminars on mentality reform, etc.

○ Collective trainings for promoting gender equality, etc.

○ Creation and distribution of pamphlets featuring roles played by female personnel and support for work-life balance, etc.

A Scene of the Collective Training

Others (¥30 million)

○ Recruitment of female SDF personnel
Create brochures targeting female recruits

○ Promote measures to prevent sexual harassment

（３） Enhancement of Educational and Research System

Implement measures to enhance the education and research systems at the National Institute for Defense Studies, the National Defense Academy, and the National Defense Medical College, and develop an environment enabling personnel to devote themselves to their duties.

The National Institute for Defense Studies

○ Promoting global academic exchange
Start academic exchange programs with national defense academies and security policy think-tanks in Africa.

Reference: African Security Studies Seminar (held at the National Institute for Defense Studies)

The National Defense Academy

○ Development of the education and research system
Develop educational experimental equipment to adapt to advances in the field of science and technology and to the expansion of the educational research field. (¥300 million).

The National Defense Medical College

○ Strengthen the functions of the college as a hub for education and research in the field of defense medicine
- Conduct advanced research on defense medicine (¥300 million).

○ Enhance the patient examination system
- Increase the number of nurses corresponding to the 7 patients to 1 caretaker system.

Advanced Research on Defense Medicine (battle injury/trauma field)

Blast-Simulated Shock Wave Generator

Nurses at Work (conceptual image)

（4） Enhancement of Medical Functions

In order to respond to various situations, SDF will strive to enhance measures such as frontline first aid capabilities and the capacity to conduct Damage Control Surgery (DCS) at medical bases to stabilize the symptoms of patients as part of strengthening the system to seamlessly cover the entire stretch between the frontline and final medical evacuation destinations. Moreover, SDF will establish an efficient and high-quality medical care regime through further endeavors including upgrading of SDF hospitals into medical hubs with enhanced functions.

○ Improve first aid and transfer capabilities in response to emergency events

- Development of educational equipment to enhance the first aid capability (¥200 million).
- Develop a simulator as an educational equipment intended to help acquire skills required for the treatment of gunshot wounds and other injuries.
- Development of portable medicine equipment necessary for medical protection unit personnel who are certified assistant nurses and paramedics to implement life-saving procedures in the front lines.
- Development of medical equipment necessary to perform a damage control surgery.
- Develop a Field surgical system (¥200 million).
- Develop equipment required in a damage control surgery (DCS) (¥50 million).

Field surgical System

Examples of Equipment for DCS

○ Initiatives toward upgrading SDF hospitals to hubs with enhanced functions

Steadily promote development of a core hospital in each district and hospitals with special functions, including education of international activities, submarine medicine, and aviation medicine.

- Construction of the building of SDF Iruma Hospital (provisional name) in line with the consolidation of SDF hospitals (¥4.1 billion)
- Basic study for the reconstruction of SDF Yokosuka Hospital (¥70 million).
- Development toward the conversion of the medical care information system for SDF Central Hospital and other SDF hospitals. (¥2.2 billion)
- Development of medical devices to reinforce the patient examination system at SDF Hospitals and Clinics (¥600 million)

SDF Iruma Hospital (tentative name) (conceptual image)

Example of Medical Devices

○ Enhance capabilities in response to infectious diseases

- Training to develop medical officers and others with professional expertise.
- Overseas field survey to consider measures for training personnel in the field of global infectious diseases.
- Field survey to grasp detailed procedures in order to establish a system to transfer patients with infectious diseases.

Image of Response to an Infectious Disease

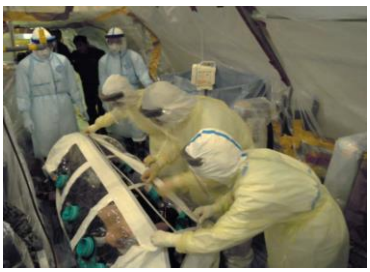


Image of Transferring a Patient

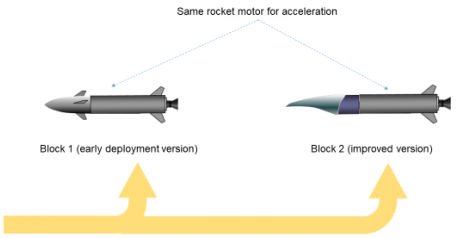
2 Reinforcing Technology Base

(1) Promotion of Research and Development for Early Practical Use

Cut down the time required for research and development as well as procurement of equipment, and promote research and development for early operationalization.

Promotion of Early Practical Use of Equipment through Stepwise Research and Development

○ Research on HVGP (Hyper Velocity Gliding Projectile) for Defense of Remote Islands (repost)
By stepwise development, results of research on element technologies of a hyper velocity glide missile intended for the defense of remote islands, which began in FY2018, is going to be promptly applied to equipment, and make them operational sequentially.

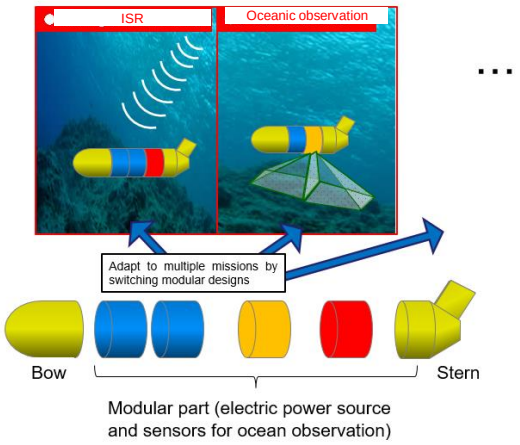


Stepwise Development of HVGP for Defense of Remote Islands (conceptual image)

Reduce Future Lead Time for Research and Development and its Cost by Modularization

○ Research on UUV* with convertible mission modules (repost)
Modularization allows prompt development of module with ne functions and capabilities according to operational needs, and therefore realize an expansion of capabilities at a reduced lead time and cost.

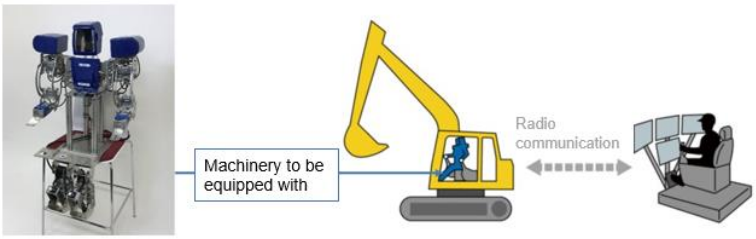
* UUV: Unmanned Underwater Vehicle



Research on UUV with convertible mission modules *(conceptual image)*

Promotion of Rapid Prototyping of Evolving Cutting-Edge Civilian Technologies to Defense Equipment

○ Initiatives to realize rapid prototyping of new technologies (0.7 billion)
Realizing practical application in a short time period - around three to five years – through cooperation between engineers and operators in incorporating rapidly evolving, cutting-edge civilian technologies which have a short innovation cycle, including information and communication technology (ICT). Meanwhile seeking to curb product price and maintenance costs for defense equipment by using the results of these initiatives in the civilian market.



An Example of Initiatives Related to Quick Practical Application of Rapidly Evolving Cutting-Edge Civilian Technologies (enabling unmanned operation of equipment with the use of actuator technology)

（２） Promotion of Strategic Effort to Ensure Technological Superiority

Promote prioritized research in promising fields and proactively utilize civilian technologies in order to ensure Japan's technological superiority during rapid technological innovation.

Promotion of Prioritized Research in Promising Fields

Place priority on fields related to (i) unmanned technology, (ii) smart and network technology, (iii) high-power energy technology, and (iv) improvement of function and performance of existing equipment, as indicated in the Medium-to-Long Term Defense Technology Outlook (announced in August 2016)

Automation

○ Research on UUV with convertible mission modules (repost)

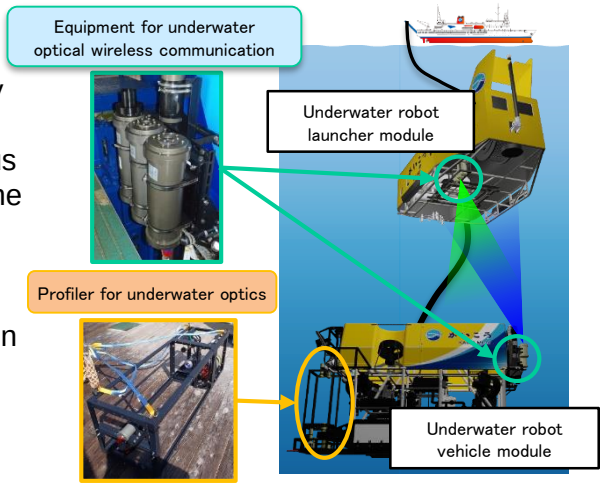
○ Research on technologies used for remotely-operated support aircraft (¥800 million)
Conduct research related to human machine interface technology necessary for formation flight technology and remote control, which are required for a future remote-control support aircraft that can assist manned aircraft.

Improvement of Function and Capabilities of Existing Equipment

○ Research on SCRAM-jet to realize a future hypersonic weapons (repost)

Discovery and Promotion of Cutting-Edge Technologies Expected to be Used for Defense Applications

○ Innovative Science & Technology Initiatives for Security (Funding Program) (¥10.1 billion)
Established in FY2015 with the aim to discover ingenious research regarding advanced civilian technologies, with the expectation that the studies would contribute to future research and development in the defense field.
Expanded to enable the awards of larger-scale and longer-term research projects for advanced technologies in FY2017 to continue to push the funding program.



An Example of a Research Program Conducted under the Innovative Science & Technology Initiatives for Security (Underwater optical wireless communication)

Initiatives to Use Private-Sector Knowledge

○ Conduct a study to take advantage of private-sector knowledge to be used in the new operational concept, which utilizes cutting-edge technologies anticipated to be practically applied in the future. Additionally, hold a workshop inviting experts from abroad in these fields.(¥50 million)

(3) Promotion of Optimized acquisition through Project Management etc.

Strengthening project management to steadily promote acquisition programs concerning equipments intended for prioritized project management, and implement initiatives that give consideration to joint operation and standardization.

Steady Implementation of Acquisition Programs

○ Promotion of Optimized acquisition of equipment, etc. intended for prioritized project management

- Major programs designated for project management
  Advanced ballistic missile interceptor (SM-3 Block IIA), Type-03 medium-range surface-to-air missile (modified), unmanned aerial vehicle (Globalhawk), amphibious vehicle (AAV7), new vessel, new utility helicopter (UH-X for GSDF), tilt-rotor aircraft (V-22), new patrol helicopter (improved SH-60K), fixed-wing patrol aircraft (P-1), transport aircraft (C-2), fighter aircraft (F-35A), future fighter aircraft, FY2017 submarines, land-based Aegis System (Aegis Ashore), Type-16 mobility combat vehicle, new aerial refueling and transport aircraft (KC-46A), and new air-borne early-warning aircraft (E-2D).
- Semi-major programs designated for project management ~~programs~~ (project management should be conducted in a similar manner to the major programs)
  New ship-to-air guided missile, Type-12 surface-to-ship guided missile (improved), new air-to-ship guided missile for patrol aircraft, and Space Situational Awareness (SSA) system.

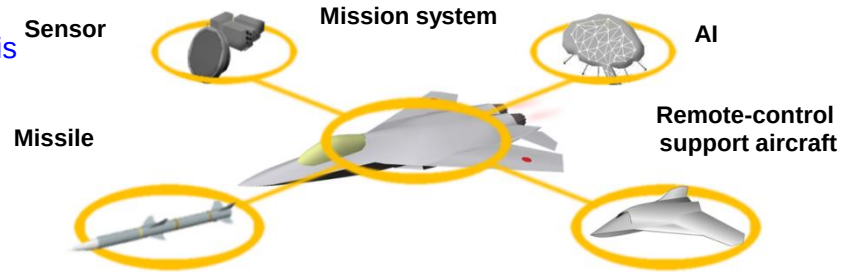
○ Strengthening project management

- Research on improving life cycle cost estimate (¥20 million)
- Increase the number of personnel to deal with the increasing number of programs newly selected for project management etc.

Initiatives Related to Equipment Intended for Priority Project Management

(Future Fighter Jet)

○ Research on the integration of the mission system of a fighter aircraft (¥5.7 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.



Integration of Mission System (conceptual image)

○ Research on overall feasibility of the development of a future fighter (¥800 million)
Conduct studies on concept and development plans as well as capability assessment in the event of cooperation with other countries

○ Research on technologies used for remotely-operated support aircraft (repost)

Study on the Feasibility of Cost Reductions using Cutting-Edge Production Technologies

○ Study on the use of Additive Manufacturing (AM) technology in the maintenance of equipment (repost)

Initiatives Related to Equipment Taking Account of the Viewpoint of Joint Operation

○ Promotion of standardization of equipment contributing to joint operation

（４） Promotion of Defense Equipment and Technology Cooperation

Strengthen measures to promote effective defense equipment and technology cooperation in collaboration with private sectors through collecting information on partner countries' needs, promoting the cooperation as a package including assistance for maintenance, and publicizing our defense equipment, based on the progress of cooperative projects with the countries.

○ Measures to promote defense equipment and technology cooperation

In order to improve the feasibility of defense equipment and technology cooperation in the field of ships, conduct studies on issues related to realize the transfer of ship parts (¥10 million)

○ Measures to improve the bases for promoting defense equipment and technology cooperation

- Conduct the outside knowledge based research on technology control for preventing technology leakage in order to obtain necessary information for appropriate and quick evaluations of technological sensitivity in strict examination based on the Three Principles on Transfer of Defense Equipment and Technology (¥50 million)
- Conduct studies taking account of the overseas transfer on newly initiated research and development projects.

○ Strategic intelligence gathering to realize cooperation suited to other countries' circumstances

- Clarify cooperation partner countries' needs and the feasibility of cooperation by conducting a survey on their procurement systems, production and technological bases (¥200 million)
- Promoting cooperative projects closely with other countries through dispatch of personnel of the Acquisition, Technology and Logistics Agency, who engage in defense equipment cooperation (¥70 million)
- Conduct a survey on other countries' research and development systems and circumstances concerning technological cooperation to further promote technological cooperation (¥50 million)

○ Promotion of comprehensive cooperation with not only equipment but also maintenance

- Dispatching personnel of Japanese maintenance companies to the Philippines.

① Improve the maintenance capability on the TC-90 (¥200 million).

② Transfer of technological information related to the transfer of UH-1H parts and maintenance equipment (¥30 million)

- Dispatch Japanese private-sector engineers and invite local private-sector engineers as part of capacity building assistance concerning equipment maintenance for ASEAN member states (¥30 million).

Component for UH-1H to be Transferred (a part of the whole)

○ Disseminate information of Japan's equipment through cooperation between the public and private sectors

Open booths of the Acquisition, Technology and Logistics Agency during international defense equipment exhibitions and display defense equipment developed in Japan and superior technologies possessed by small and medium-sized Japanese enterprises (¥200 million)

Booth Hosted by the Acquisition, Technology and Logistics Agency (Eurosatory 2018)

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

Ground Display of the C-2 Transport Aircraft (Dubai Air Show 2017)

○ Initiatives to raise the participation level in the NATO Codification System which is the international standard for the codification of equipment, etc.

Modify the system to enable Japan to register domestically-produced defense equipment, and to share and disseminate information as well as raising Japan's participation level (¥200 million).

（5） Promotion of Measures to Maintain and Strengthen Defense Production and Technological Bases

Regarding the defense industry in a severe environment, promote measures to maintain and strengthen the bases through discovering and utilizing superior technologies possessed by small and medium-sized enterprises and grasping the actual circumstances of supply chains.

○ Discover and utilize innovative manufacturing technologies and technologies possessed by small and medium-sized enterprises

- Create opportunities for small and medium-sized enterprises possessing technologies applicable to defense equipment to match with the MOD/SDF by making use of exhibitions (¥10 million).
- Conduct ~~a~~ surveys on the possibility of applying innovative manufacturing technologies such as 3D printing and AI to defense equipment through the matching project (¥90 million)
- Discover advanced civilian technologies through a program for quick practical application of new technologies (repost).


Workshops and Exhibitions to Encourage Entry by Small and Medium-Sized Enterprises (conceptual image)

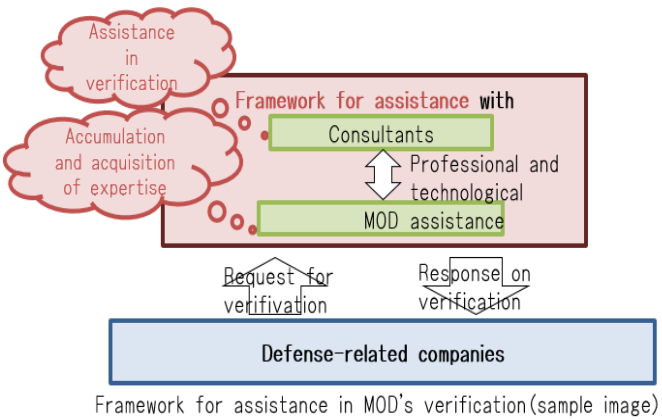
○ Conduct surveys on the actual circumstances of supply chains of defense equipment

- In particular, survey small and medium-sized enterprises with advanced technologies and realize measures to strengthen defense supply chains.
- Conduct surveys on identifying components of defense equipment with high applicability to other industrial sectors and companies involved in that production in order to take necessary measures (¥40 million)

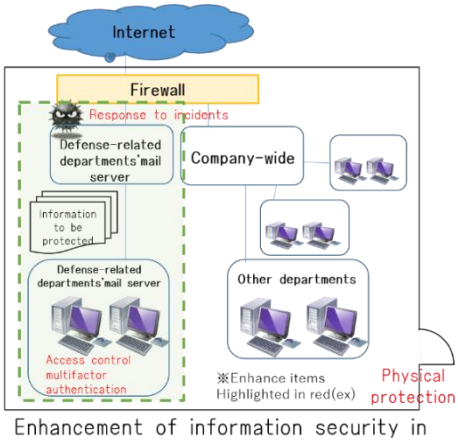
○ Research on a new method of promoting the procurement reform Conduct surveys and research on ways of streamlining and reducing the cost of defense equipment, such as encouraging competition between companies through active evaluation of companies by the MOD, and then establish concrete systems (¥30 million)

○ Strengthen information security concerning defense procurement

Build a framework utilizing technological and professional support from outside consultants to assist JMOD in verifying companies' compliance with the strengthened information security standard that is applied to companies handling the information to be protected, to encourage JMOD's security inspectors to acquire and cultivate knowledge concerning the new standard, and to facilitate companies to swiftly achieve the adaptation to the new standard (¥100 million)



Framework for assistance in MOD's verification (sample image)



Enhancement of information security in defense-related companies (sample image)

3 Enhancing Intelligence Capabilities

In order to be able to provide timely and effective intelligence support to policy decision and SDF operations, MOD/SDF will enhance intelligence capabilities at all stages, including gathering and analyzing of information.

○ Enhancement of Defense Attaché system

○ Reinforcement of intelligence collection and analysis capabilities
Establish necessary arrangements at the Defense Intelligence Headquarters, etc. to enhance capabilities of intelligence collection and analysis of international military situations, etc.

○ Development of common infrastructure at the Defense Intelligence Headquarters
Establish shared information platform to integrate various and wide range of intelligence gathered by all services of the SDF and the Defense Intelligence Headquarters, in order to promote all-source analysis.

○ Procurement of long-endurance UAV (RQ-4B Global Hawk) (repost)

○ Procurement of data for image analysis (WorldView-4, domestic commercial optical satellite, miniature satellites for earth observation, etc.) (repost)
Collect information concerning the region surrounding Japan using domestic commercial optical satellite, miniature satellites for earth observation, etc., including the MOD's main optical satellite (WorldView-4), to which MOD has an exclusive tasking right.

WorldView-4 (conceptual image)

Ⅳ Response to Large-Scale Disasters

In the event of a natural disaster, the SDF will respond to it by immediately transporting and deploying sufficient numbers of SDF units based on a joint operational approach, and also will promote measures to strengthen the response posture.

1 Maintenance/Enhancement of Function of Military Camps/Bases to Serve as Hubs for Disaster Response

○ Promotion of seismic retrofitting and tsunami defense measures to maintain and enhance functions in preparation for the event of a disaster (¥13.3 billion)

○ Development of disaster response hub areas, etc. (Iruma) (¥900 million)

Development of Disaster Response Hub Areas, etc. (Iruma)

2 Implementation of Exercises to Respond to Large-Scale and Unconventional Disasters

○ SDF Joint Exercise for Rescue (JXR: Joint Exercise for Rescue)

Implement the SDF Joint Exercise for Rescue to maintain and improve the SDF's joint operation capabilities to respond to large-scale domestic disasters, in order to minimize damage through smooth and effective responses in the event of large-scale domestic disasters.

SDF Joint Exercise for Rescue (JXR)

○ Joint Disaster Response Exercise with U.S. Forces (TREX: Tomodachi Rescue Exercise)

Implement Joint Disaster Response Exercise with U.S. Forces to establish procedures on coordination with U.S. Forces in Japan in the event of large-scale domestic disasters, and to maintain and enhance the disaster response capabilities.

Joint Disaster Response Exercise with U.S. Forces (TREX)

○ Remote Island Disaster Relief Exercise (RIDEX: Remote Island Disaster Exercise)

Implement drills to maintain and enhance capabilities to ensure smooth joint disaster response operations against sudden disasters caused by large-scale disasters on remote islands.

Remote Island Disaster Relief Exercise

3 Procurement of Equipment Contributing to Disaster Response

○ Procurement of new utility helicopter (UH-X) (repost)

○ Procurement of transport aircraft (C-2) (repost)

○ Procurement of equipment to respond to various situations, including disasters.
- Water purification set (1 set: ¥100 million)
- Hydraulic pressure shovel (with grapple) (3 sets) (*)
- Material transport vehicles (8 vehicles) (*)

Water Purification Set

Hydraulic Pressure Shovel (with grapple)

Material Transport Vehicle

○ Development of aerial fire fighting equipment for wildfire (1 set) (*)
Procure aerial fire fighting equipment (fire fighting bucket, etc.) necessary for disaster dispatch to conduct swift and effective fire suppression in the event of a disaster dispatch for wildfires.

Aerial Fire Fighting Equipment

○ Development of drone for disaster response (*)
Procure drone for disaster response for quick and on-target rescue operations in the event of a large-scale disaster.

○ Development of a life-saving system (2 sets) (*)
Procure a life-saving system in order to conduct life-saving activity quickly and effectively in the event of large-scale disasters.

Life-Saving System (component: rescue boat)

(*) is accumulated to FY2918 supplementary budget.

○ Procurement of Type-10 snow tractors (10 tractors: ¥300 million)

○ Type-07 mobility support bridge (1 set: ¥1.2 billion)
Procure a mobility support bridge in order to temporarily restore bridges damaged by earthquakes, floods, etc., conduct emergency evacuation of disaster-affected people and enable relief activities by the SDF and local governments.

Type-07 Mobility Support Bridge (disaster management exercise)

○ Response to NBC weapons
- Procurement of decontamination set (decontamination vehicle) (1 vehicle: ¥100 million)
- Procurement of NBC alarms (1 set: ¥300 million)
- Procurement of decontamination set (Type-1 decontamination equipment) (1 set: ¥100 million)
- Type-18 personal protective equipment (7500 sets: ¥1.8 billion)
- Chemicals detectors (10 sets) (*)

Decontamination Set (decontamination vehicle)

4 Actions based on Three-Year Emergency Measures for Disaster Prevention/Reduction and National Resilience

○ Emergency measures related to SDF equipment for disaster prevention and facilities
* Refer to the page 40 for the details of program in general.

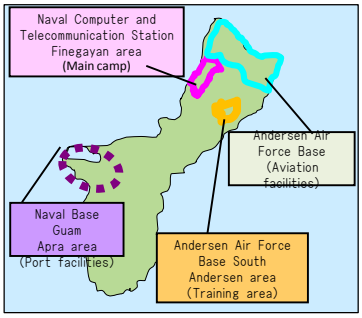
(*) is accumulated to FY2918 supplementary budget.

Ⅴ Strengthening Japan-U.S. Alliance and Measures for Bases

While maintaining the deterrence of U.S. Forces, Japan will steadily implement specific measures, including the realignment of U.S. Forces in Japan, to mitigate the impact on local communities, such as those in Okinawa.

¥254 billion

1 U.S. Forces Realignment-Related Expenses [measures for mitigating the impact on local communities]



Guam

Relocation of U.S. Marine Corps Stationed in Okinawa to Guam

○ Projects concerning the relocation of the U.S. Marine Corps stationed in Okinawa to Guam (¥21.9 billion)
Development of Bachelor Enlisted Quarters buildings,etc.
(Finegayan Area)

Realignment-Related Measures of U.S. Forces in Japan

MCAS Futenma

○ Project for the realignment in Okinawa (¥146.1 billion)
- Relocation of Marine Corps Air Station Futenma (¥70.7 billion)
- Return of land areas south of Kadena Air Base (¥75.4 billion)

○ Project for the relocation of carrier Air Wing (¥600 million)

○ Project for contingency use (¥23.5 billion)

○ Project for the training relocation (¥9.5 billion)

○ Project intended to facilitate smooth implementation of realignment-related measures (¥52.5 billion)

2 SACO-Related Expenses

¥17.2 billion

○ Japan will continue to steadily implement the measures (mitigating the impact on local communities in Okinawa) in the Special Action Committee on Okinawa(SACO) Final Report unless changes were made under the Japan-U.S. Security Consultative Committee (“2+2”) Joint Statement

3 Promotion of Measures for Bases

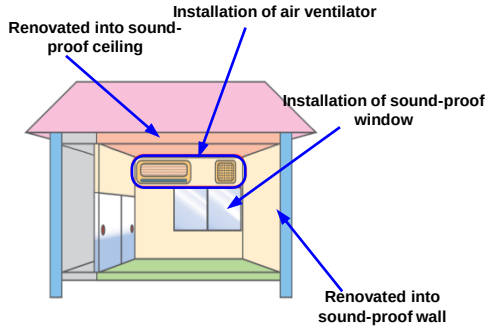
In order to balance the operational requirements of defense facilities and local communities, Japan will steadily implement measures for communities around bases, and promote measures to secure smooth and effective stationing of the U.S. Forces in Japan.

(1) Expenses Related to Programs for Communities Around Bases

¥116.2 billion

Including: Residential sound proofing: ¥52.3 billion
Improvement of living environment of neighboring communities: ¥63.9 billion

[Example of Residential Sound Proofing]



○ Expenses for the prevention of disturbances resulting from SDF activities or the establishment and operations of defense facilities

- Implementation of sound proofing projects for residences around air bases, etc.
- Implementation of projects to improve the living environment of neighboring communities (river and road restoration, sound-proofing systems in schools, sand control dams, improvement of public welfare facilities, etc.).
- Implementation of projects covered by specified Defense Facilities Environment Improvement Adjustment Grants, which are strongly requested from municipalities around bases (development of public facilities and so-called soft projects, such as medical cost subsidies, etc.).

Sand Control Dam

(2) Cost Sharing for the Stationing of U.S. Forces in Japan

¥198.7 billion

Including: Special Measures Agreement: ¥149.7 billion
Facilities Improvement Program: ¥22 billion
USFJ employee measures, etc.: ¥27 billion

Barracks

○ Expenses of cost sharing based on the Special Measures Agreement and other measures to ensure the smooth and effective stationing of U.S. Forces in Japan

- Share the labor cost of USFJ employees and cost of utilities used at USFJ facilities.
- Facilities Improvement Program (barracks, family housing, etc.).
- Share the cost of social insurance premiums by the employer (healthcare insurance, welfare annuity insurance, etc.) for USFJ employees.

(3) Rent for Facilities, Compensation Expenses, etc.

¥146.2 billion

○ Rental cost for the land of defense facilities and compensation for the loss of fishers' income due to training on water areas, etc.

Ⅵ Strengthening Security Cooperation

Japan will actively leverage its defense capability to work on defense cooperation and exchanges which include joint training and exercises, defense equipment and technology cooperation, capacity building assistance and interchanges among military branches to strategically promote multi-faceted and multi -layered security cooperation, in line with the vision of free and open Indo-Pacific.

1 Contribution to Stabilization of the Indo-Pacific Region

Promotion of Capacity Building

Japan-ASEAN Humanitarian Assistance/Disaster Relief Seminar

○ Promotion of initiatives emphasizing capacity building for the ASEAN as a whole

Implement capacity building initiatives concerning humanitarian assistance/disaster relief and maritime security, while also promoting sharing of the recognition of international laws.

○ Promotion of capacity building in the Indo-Pacific region

- Implement programs in improving capabilities and training personnel in Southeast Asia in fields such as humanitarian assistance/disaster relief and PKO.
- Implement capacity building programs related to field such as maritime security in South Asia and Pacific island nations.

Field Training in the PKO (engineering) field

Promotion of Defense Cooperation and Exchanges

○ Initiatives under the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus)

Proactively facilitate the enhancement of regional defense and security cooperation through the ADMM-Plus, which is the only official meeting of defense ministers of the whole Asia-Pacific region which includes Japan.

ADMM-Plus

○ Initiatives under the Vientiane Vision

Promote practical defense cooperation that contributes to the enhancement of the capabilities of the whole ASEAN in addition to individual ASEAN countries based on the Vientiane Vision, which is the guidelines for Japan-ASEAN defense cooperation.

Japan-ASEAN Ship Rider Cooperation Program

○ Reinforcement of relationships with foreign graduates of JMOD/JSDF educational institutions (¥30 million)

Invite foreign graduates of the National Defense Academy, who are active liaisons between the MOD/SDF and their respective countries, and conduct visits to the NDA and interactions with Japanese classmates to help enhance relationships with the foreign graduates of the NDA.

○ Hosting the International Defense Rugby Competition and the International Cadets Rugby Competition (¥200 million)

In order to encourage interactions among armed forces and cadets from various countries in the area of sports, and help them build mutual understanding and relationships of trust, the International Defense Rugby Competition and International Cadets Rugby Competition will be held in line with the Rugby World Cup 2019. The JSDF team and armed forces from various countries will participate in the IDRC and the National Defense Academy Cadets' team and teams of cadets from various countries will participate in the ICRC.

〔SDF Vs. UK Royal Navy (last competition)〕

○ Participation in the Pacific Partnership 2019

By visiting countries in the Indo-Pacific region to provide medical services and conduct cultural exchanges, the Pacific Partnership strengthens partnerships among participating countries and facilitates international disaster relief operations through cooperation with governments, militaries, international organizations and NGOs.

Pacific Partnership

○ Japan-U.S.-Australia Humanitarian Assistance/Disaster Relief Joint Exercise in Micronesia (¥10 million)

Jointly working with the U.S. and Australia to improve the airdrop capabilities and to reinforce partnerships in order to conduct swift and effective assistance operations in flooded areas or sea areas in the event of a large-scale disaster including flood or a tsunami.

Japan-U.S.-Australia HA/DR Joint Exercise

2 Appropriately Respond to Improve Global Security Challenges

Enhancement of Capability to Conduct Overseas Activities

○ Participation in multilateral exercises

The GSDF, MSDF and ASDF participate in multilateral exercises such as Cobra Gold in order to enhance capabilities for international peace cooperation activities.

Cobra Gold

International Cooperation with UN and Partners in the Areas of Strength

- Dispatch of instructors to PKO Centers in African countries
  The SDF dispatches personnel as instructors in order to educate peace keeper candidates, mainly in African countries, to help improve their own peacekeeping capabilities and to maintain stability in the region.

- Capacity building assistance of disaster response capacity enhancement for the Djibouti Forces
  Promote mutual understanding and confidence building with the Republic of Djibouti, mainly through enhancement of the relationship between the defense authorities, and contribute to the development and peace of Africa by implementing assistance to enhance disaster response capabilities for the Djibouti Forces, for which there has been a strong request from the Djibouti government.

Education Concerning the Operation of Engineering Equipment

- Dispatch of lecturers to the UN project for Rapid Deployment of Enabling Capabilities (RDEC)
  Contribute to rapid deployment of U.N. PKO engineering units by dispatching SDF personnel and providing education to engineers from African and other countries with regard to the operation of heavy machinery.

A Japanese Instructor Training Students (Tanzanian Armed Forces, etc.) on operation of heavy machinery

Ensuring Maritime Security

- Counter-piracy operations off the coast of Somalia and in the Gulf of Aden
  - Continue counter-piracy operations by destroyers and P-3Cs off the Coast of Somalia and in the Gulf of Aden.
  - Carry out activities in Combined Task Force 151 (CTF151), a multinational counter-piracy task force.
  - Conduct air transportation using C-130H as necessary.

A Destroyer Escorting Commercial Vessels

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

In order to take all necessary measures for natural disasters, Japan will concentratedly conduct development of equipment that is necessary for rescue operations and maintenance/enhancement of functions such as garrisons for disaster prevention, based on “Actions based on 3 -Year Emergency Measures for Disaster Prevention/Reduction and National Resilience” (approved by the Cabinet on December 14, 2018).

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)
* The amount of cost is on an expenditure base.

- 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)

- 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.

Ⅷ Streamlining Initiatives

Various initiatives will facilitate further efficiency and streamlining overall equipment procurements, seeking to save approx. ¥415.9 billion.

1 Procurement of Equipment and Services Using Long-Term Contracts

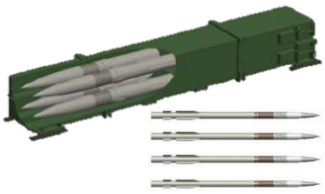
［expected reduction: approx. ¥35.6 billion］

Pursue lower-cost and stable procurement of equipment and services by making use of long-term contracts of six fiscal years or longer

○ Cost reduction through the bulk purchase of maintenance parts for the PAC-3 missiles, which had previously been procured for each repair

・ Bulk purchase contract on parts for the PAC-3 missile (procured over ten fiscal years) (expected reduction: ¥3.1 billion).

○ Bulk-procurement of nine airborne early-warning aircraft (E-2D) by long-term contract (procured over seven fiscal years) (expected reduction: ¥32.5 billion)



Parts for PAC-3 Missile

Early-Warning Aircraft (E-2D)

2 Review of Maintenance Methods ［expected reduction: approx. ¥15.3 billion］

Streamline maintenance costs by consolidating equipment, etc.

[Example]

○ Integration of Information System (expected reduction: ¥5.1 billion)
Reduce maintenance and operation costs by integrating hardware and software leased for each information system.

3 Use of Civilian Goods and Review of Specifications

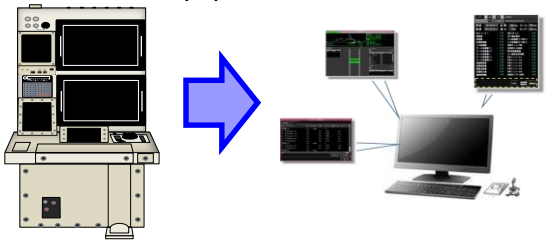
［expected reduction: approx. ¥33.8 billion］

Pursue cost savings by using civilian goods and reviewing specifications of equipment

[Examples]

○ Development of digital educational materials (expected reduction: ¥11.2 billion)
Seek to save costs by switching to inexpensive digital learning materials instead of introducing actual equipment for education and training machines.
※ ＡＥＣ (Advanced Electronic Classroom System)

○ Research for the FC network (expected reduction: ¥5.5 billion)
Pursue cost savings by reviewing the specifications of radio equipment and utilizing existing technologies.



*Turning the Sonar System for Surface Ships (OQQ) into AEC**

4 Bulk Purchase of Equipment ［expected reduction: approx. ¥16.3 billion］

Streamline costs by concentrating budget requests for equipment in a single fiscal year, which is otherwise costly due to small-lot purchases.

5 Cost Scrutiny, etc. ［expected reduction: approx. ¥112.9 billion］

Pursue reduction of the procurement cost for major equipment through examination of unit costs and related expenses.

6 Review Low Cost-Effective Project ［expected reduction: approx. ¥202 billion］

[Examples]

○ Cost reduction by switching to import of completed F-35A from FACO (expected reduction: ¥29.4 billion), ※FACO:Final Assembly and Check Out)

Ⅸ Others

1 Restructuring and Organizational Quota Changes

Implement unit reorganization programs in order to ensure effective deterrence and response to various situations.

◯ Establishment of “Airborne Warning and Control Wing” (repost)

◯ Request for increase in the number of SDF personnel

Improve the readiness to quickly respond to various situations by increasing the number of uniformed SDF personnel to develop and reinforce the defense postures in the southwestern region as well as in its surrounding sea and airspace, while also improving the response capability to cyberattacks.

	GSDF	MSDF	ASDF	Joint Staff Office and others	Total
Improve sufficiency rate	＋２５０	＋２１０	＋２０４	０	＋６６４
Transfer	△５７	△４	△１３	＋７４	
Total	＋１９３	＋２０６	＋１９１	＋７４	

Note: Joint Staff Office and others include Joint Staff Office, joint task units, Defense Intelligence Headquarters, Internal Bureau, and the Acquisition, Technology and Logistics Agency.

◯ Organizational quota changes

- Establish “Space and Maritime Security Policy Office (tentative name)” in the Strategic Planning Division of Bureau of Defense Policy to strengthen the function of project planning related to the stable use of space and maritime policy in the JMOD/SDF, and coordination with other ministries and agencies.(repost)

- Establish the “Electromagnetic Spectrum Policy Office (tentative name)” in the Information and Communications Division of the Bureau of Defense Buildup Planning to enhance the ability to make policies pertaining to effective and efficient use of electromagnetic spectrum in the JMOD/JSDF and coordination with other ministries and agencies (repost).

- To strengthen postures in the JMOD/JSDF in a unified manner for the introduction of AI, establish the “AI/Cyber Security Promotion Office (tentative name)” in the Information and Communications Division of the Bureau of Defense Buildup Planning, and create the “AI Planning Section” (tentative name) in the new office (repost).

- Establish the “Recruitment Promotion Office (tentative name)” in the Human Resources Development Division of the Bureau of Personnel and Education to work on strengthening collaboration with local public entities and other ministries and agencies (repost).

- In order to develop an organization of the Advanced Defense Technology Center in the Acquisition, Technology and Logistics Agency, to conduct translational research in an integrated manner to apply the results of advanced basic research obtained through the Innovative Science & Technology Initiative for Security to practical research on operationalization; transfer a portion of the operation concerning the said initiative, which is now administered by the Director of Technology Promotion and IP Management of the Department of Technology Strategy of the Acquisition, Technology and Logistics Agency, to the Advanced Defense Technology Center (change of operation).

2 Initiatives to Ensure Appropriate Management of Administrative Documents

○ Establish the position of Chief Record Officer (tentative name) (universally known as “CRO of government organizations”) and the Office of Chief Record Officer

Create the position of Chief Record Officer (tentative name), who is in charge of the management of public documents and public information disclosure, and the Office of Chief Record Officer , which reports to the newly established Chief position to enhance the ability to oversee the management of administrative documents and response to requests of public information disclosure, and to ensure a unified and appropriate management of administrative documents.

○ Increase the number of personnel to advance the electronic management of documents

Increase the number of personnel to advance the efficient management of digitalized documents and to shift to an electronic approval system

○ Conduct a demonstrative study/consideration including utilization of advanced IT such as AI to introduce and develop a system contributing to the integrated storage and understanding of documents (repost)

3 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 when 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 of the 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.

After concluding this agreement, special tax measures related to the clause will be introduced to the extent granted in the agreement

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

Blank

Major Equipment

1 Major Equipment

Procurement type				FY2018 Number procured	FY2019 Number procured	FY2019 Amount (¥100 million)
Aircraft	GSDF	Tilt-rotor aircraft (V-22)		4	—	—
		New utility helicopter (UH-X)		—	6	110 (53)
	MSDF	Life extension of fixed-wing patrol aircraft (P-3C)		(3)	(5)	22
		Life extension of patrol helicopter (SH-60K)		(3)	(3)	64
		Life extension of patrol helicopter (SH-60J)		(2)	(2)	13
		Life extension of imagery intelligence gathering aircraft (OP-3C)		(1)	—	—
		Improvement in capability of radars mounted on fixed-wing patrol aircraft (P-3C)	Upgrade	(4)	(1)	0.3
			Parts	(—)	(—)	
	ASDF	Fighter aircraft (F-35A)		6	6	681
		Improvement in air-to-air combat capability of fighter aircraft (F-2)	Upgrade	(2)	(—)	1
			Parts	(5)	(7)	
		Additional installment of JDCS (F) function to fighter aircraft (F-2)		(2)	—	
		Improvement in capability of fighter aircraft (F-15)		—	(2)	108
		Transport aircraft (C-2)		2	2	453 (24)
		Airborne early-warning aircraft (E-2D)		1	9	1,940
		Improvement in capability of Airborne Warning and Control Systems (E-767)	Upgrade	(1)	(1)	129
			Parts	(—)	(—)	
		New aerial refueling and transport aircraft (KC-46A)		1	—	—
		Installment of aerial refueling capability in transport aircraft (C-130H)	Upgrade	(1)	(—)	—
			Parts	(—)	(—)	
		Unmanned aerial vehicle (RQ-4B Global Hawk)		1	1	71
Vessel	MSDF	Destroyer		2	2	951 (1)
		Submarine		1	1	698 (1)
		Life extension of Asagiri-class destoyer	Work	(2)	(2)	3
			Parts	(4)	(1)	
		Life extension of Abukuma-class destoyer	Work	(—)	(1)	0.1
			Parts	(2)	(—)	
		Life extension of Kongo-class destoyer	Work	(—)	(—)	27
			Parts	(1)	(2)	
		Life extension of Murasame-class destoyer	Work	(—)	(—)	33
			Parts	(—)	(1)	
		Life extension of Oyashio-class submarine	Work	(4)	(4)	63
			Parts	(5)	(3)	
		Life extension of Hibiki-class ocean surveillance ship	Work	(—)	(—)	11
			Parts	(1)	(2)	
		Life extension of Towada-class fast combat support ship	Work	(—)	(1)	3
			Parts	(2)	(1)	
		Improvement in capacity of the short-range SAM system on Takanami-class destroyer	Work	(1)	(1)	0.6
			Parts	(—)	(—)	
		Modernization of destroyer CIWS (high-performance 20mm autocannon)	Work	(3)	(5)	3
			Parts	(—)	(4)	

Procurement type				FY2018 Number procured	FY2019 Number procured	FY2019 Amount (¥100 million)
Vessel	MSDF	Improvement in anti-submarine capability of Akizuki-class destroyer (multistatic)	Work	(1)	(2)	0.8
			Parts	(—)	(—)	
		Improvement in calculation capability of the type-3 short-range SAM system	Work	(—)	(—)	5
			Parts	(1)	(1)	
		Modernization of command system of Asagiri-class destroyer	Work	(2)	(2)	9
			Parts	(—)	(—)	
		Update of computers in command system of takanami-class destroyer	Work	(1)	(—)	—
			Parts	(—)	(—)	
		Update of computers in command system of Murasame-class destroyer	Work	(—)	(2)	9
			Parts	(2)	(—)	
		Update of computers in command system of Akizuki-class destroyer	Work	(—)	(—)	13
			Parts	(1)	(1)	
		Update of computers in command system of Hyuga-class destroyer	Work	(1)	(1)	10
			Parts	(—)	(—)	
		Update of computers in command system of Izumo-class destroyer	Work	(—)	(1)	2
			Parts	(1)	(—)	
		Modernization of command system of Oyashio-class submarine	Work	(2)	(1)	2
			Parts	(1)	(—)	
		Improvement in capability of Osumi-class LST	Work	(2)	(—)	—
			Parts	(—)	(—)	
		Upgrade of submarine rescue ship Chihaya	Work	(—)	(—)	23 (0.6)
			Parts	(—)	(1)	
Missile	GSDF	Type-03 middle-range surface-to-air missile (modified)		1 company	1 company	141 (9)
		Type-11 short-range surface-to-air missile		1	1	47
		Middle-range multi-purpose missile		9 sets	6 sets	46
		Type-12 surface-to-ship missile		1	1	135
Firearm, vehicle, etc.	GSDF	Type-89 rifle		1,500	—	—
		Anti-personnel sniper rifle		6	6	0.3
		60mm mortar (B)		6	6	0.2
		81mm mortar L16		1	—	—
		120mm mortar RT		2	12	6
		155mm self-propelled howitzer		—	7	51 (17)
		Type-99 155mm self-propelled howitzer		7	—	—
		Type-10 tank		5	6	81
		Type-16 mobile combat vehicle		18	22	161
		Vehicle, communications equipment, facility equipment, etc.		¥19.4 billion(1)	—	344
BMD	GSDF	Land-based Aegis system (Aegis Ashore)		—	2	1,733
	MSDF	Improvement in capability of Aegis-equipped destroyers		—	2 vessels	75
	ASDF	Upgrade of Patriot system		—	12	113

Note 1: The procurement amount for FY2018 indicates the number that was envisioned in the original budget.

Note 2: Price represents amounts, excluding non-recurring costs, needed for the production of equipment. The non-recurring costs are indicated in parentheses in the amount column (external value).

Note 3: “Number procured” indicates the number newly contracted in FY2019. (The period for acquiring the item varies by equipment, but can take between two to five years.)

Note 4: The number in brackets represents the number related to upgrading the existing commissioned equipment.

Note 5: Regarding the procurement for the improvement in capability of radars mounted on fixed-wing patrol aircraft (P-3C), improvement in air-to-air combat capability of fighter aircraft (F-2), improvement in capability of Airborne Warning and Control Systems (AWACS) (E-767), installation of aerial refueling capability to transport aircraft (C-130H), improvement of the short-range SAM system on Takanami-class destroyer, modernization of destroyer CIWS (high-performance 20mm autocannon), improvement in anti-submarine capability of Akizuki-class destroyers (multistatic), improvement in calculation capability of FCS-3, etc., modernization of command system of Asagiri-class destroyers, update of computers in command system of destroyers, modernization of command system of Oyashio-class submarine, and upgrade of submarine rescue ship Chihaya, the upper figure represents the procurement of modification and work services for the existing commissioned equipment, while the lower figure represents the number of parts, etc. necessary for the capability improvement. Regarding the volume of procurement for the service like extension of vessels, the upper figure represents the number of ships subject to service life extension work and the lower figure represents the number of parts procured for service life extension work.

Note 6: The number of procurements in FY2019 for the upgrade of the capability of Aegis-equipped destroyers represents the number of procurements for upgrading two Atago-class destroyers to be able to launch SM-3 Block IIA.

2 Major Research and Development Programs

Item	Overview	FY2019 Amount (¥100 million)
Research on HVGP (Hyper Velocity Gliding Projectile) for Defense of Remote Islands	Establish component technologies, including supersonic glide technology for high altitude and technology to hit a target with high accuracy, and conduct research on technologies necessary for the early practical usage of HVGP intended for the defense of remote islands, which projects firepower in island-to-island firing.	１３９
Development of multi-purpose missile system (modified)	Develop a multi-purpose missile system (modified) with higher function and capabilities compared to the existing equipment, such as a longer range and better capability to simultaneously respond to multiple targets, at a lower procurement cost.	３５
Research on high-efficiency electricity storage and supply system for submarines	Conduct research on high-efficient electricity supply system and high-density electricity storage system to extend submarines' underwater endurance without increasing ship size.	４３
Research on FC network	Research on FC Network that Enables Network Launches through Real Time Sharing of Sensor Information within the utility Destroyer Fleet.	６３
Research on UUV with convertible mission modules	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, and conduct research to ensure credibility required in longer deployments in terms of distance and time.	４２
Research on SCRAM-jet to realize a future hyper sonic weapons	Conduct research on component technologies consisting of a scramjet engine operated by jet fuel to deliver a scramjet engine that can cruise at a hypersonic speed.	５８

3 Changes in the Number of SDF Personnel

● Changes in the number of SDF personnel

(Unit: Person)

	End of FY2018	End of FY2019	Change
GSDF	158,909	158,758	△151
Regular personnel	150,834	150,777	△57
Ready reserve personnel	8,075	7,981	△94
MSDF	45,360	45,356	△4
ASDF	46,936	46,923	△13
Joint units	1,288	1,350	62
Joint Staff Office	372	376	4
Defense Intelligence Headquarters	1,910	1,918	8
Internal Bureau	48	48	0
Acquisition, Technology and Logistics Agency	406	406	0
Total	247,154	247,154	0
	(255,229)	(255,135)	(△94)

Note 1: Figures for the end of each fiscal year are budget figures.
Note 2: The number in the parentheses includes the number of SDF ready reserve personnel.

● Number of SDF personnel (annual average)

(Unit: Person)

	GSDF	MSDF	ASDF
Annual average	140,155	42,499	43,659

● Number of SFD reserve personnel

(Unit: Person)

	GSDF	MSDF	ASDF	Total
SDF reserve personnel	46,000	1,100	800	47,900

● Number of candidates for reserve personnel

(Unit: Person)

	GSDF	MSDF	Total
SDF reserve candidates	4,600	21	4,621

● Change in the number of administrative officials

(Unit: Person)

	FY2015	FY2016	FY2017	FY2018	FY2019
Rationalization,etc	△281	△269	△269	△276	△273
Increase	164	169	182	(Note1) 209	(Note1) 204
Total	△117	△100	△87	△67	△69
Number at the end of FY(Note2)	21, 161	21, 061	20, 974	(Note1) 20, 931	(Note1) 20, 903

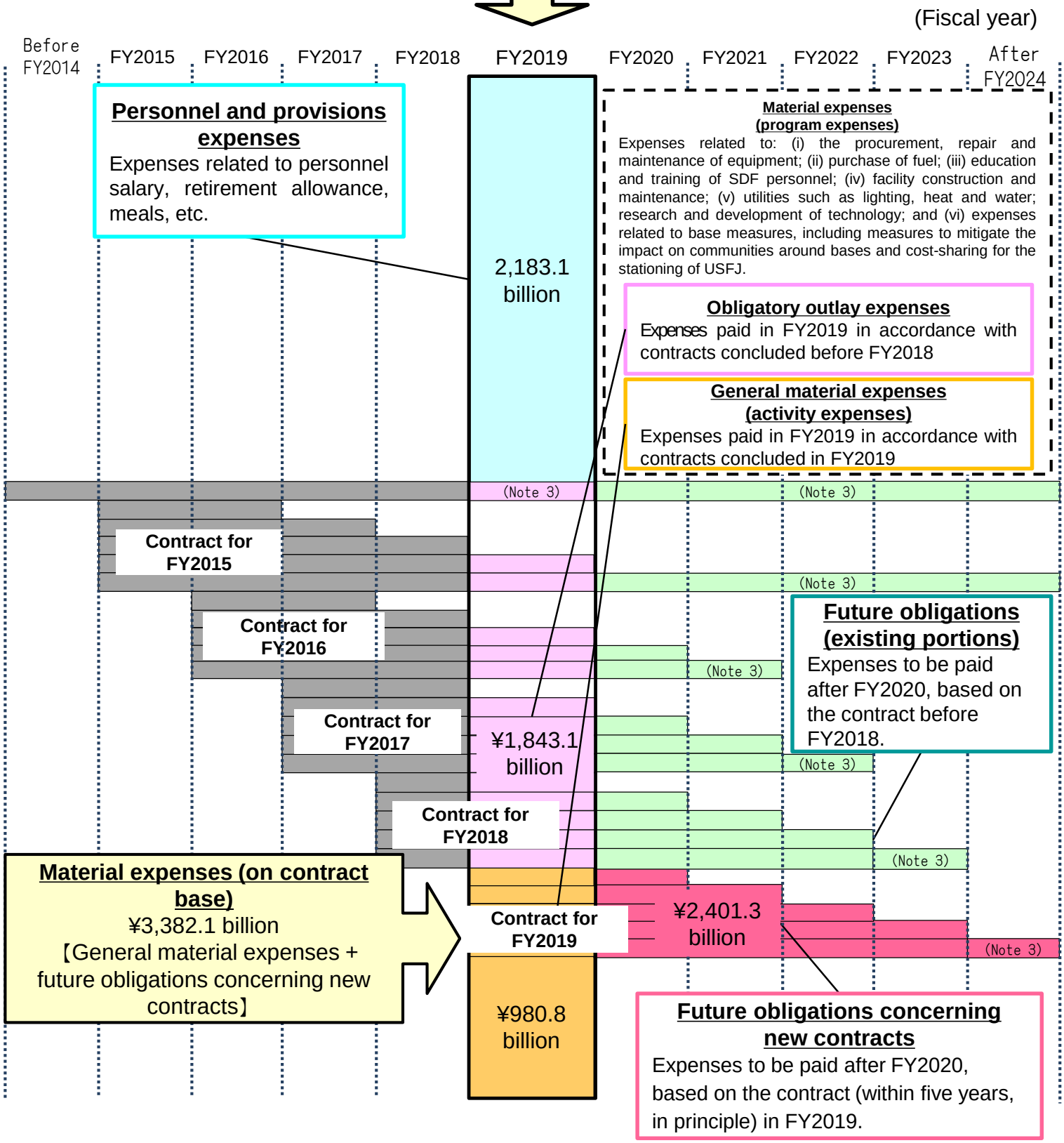
Note 1: Number at the end of FY includes number for promoting employment of persons with disabilities (FY2019: 24 officials, FY2019: 41 officials) and the increase does not include this number
Note 2: Does not include the Minister, State Minister, two Parliamentary Vice-Ministers and Senior Advisor to the Minister

Blank

Reference

Composition of Defense-Related Expenses

Expenditures: ¥5,007 billion
【Personnel and provisions expenses + obligatory outlay expenses + general material expenses】



Note 1: 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.
Note 2: This chart is a rough diagram. The length of a box does not necessarily correspond to the actual amount of expenses.
Note 3: There are expenses to be paid over 5 years in association with the introduction of long-term contracts for the procurement of equipment.

Details and Classification of Material Expenses (program expenses)

(Unit: ¥100 million)

FY2019	Expenditure base	Contract base
Material expenses (program expenses)	２８，２３９	３３，８２１
Obligatory outlay expenses	１８，４３１	
General material expenses (Activity expenses)	９，８０８	９，８０８
Future obligation concerning new contracts		２４，０１３

(Explanation)

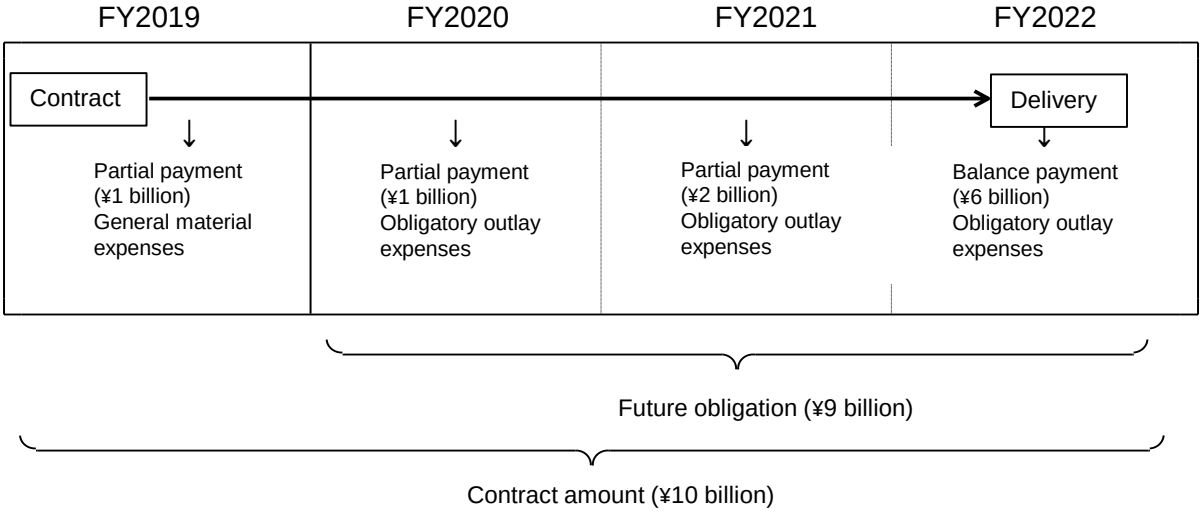
○ Expenditure base: Total amount to be paid in the current fiscal year for projects like procurement of equipment and facility development. Specifically, it is the sum of the expenses to be paid in FY2019 (general material expenses) based on the contracts concluded in FY2019 and the expenses to be paid in JFY2019 (obligatory outlay expenses) based on the contracts concluded before FY2018. This is a useful point of view in understanding the share of defense-related expenses in the overall expenditure budget of the government, which is in principle an annual budget.

○ Contract base: Total amount of contracts concluded in the current fiscal year for projects like procurement of equipment and facility development. Specifically, the sum of the expenses to be paid in FY2019 and the expenses to be paid after FY2020 (future obligation pertaining to new contracts) based on the contracts concluded in FY2019. This is a useful point of view in understanding the total amount of expenses by program with respect to year-by-year projects for developing defense capabilities.

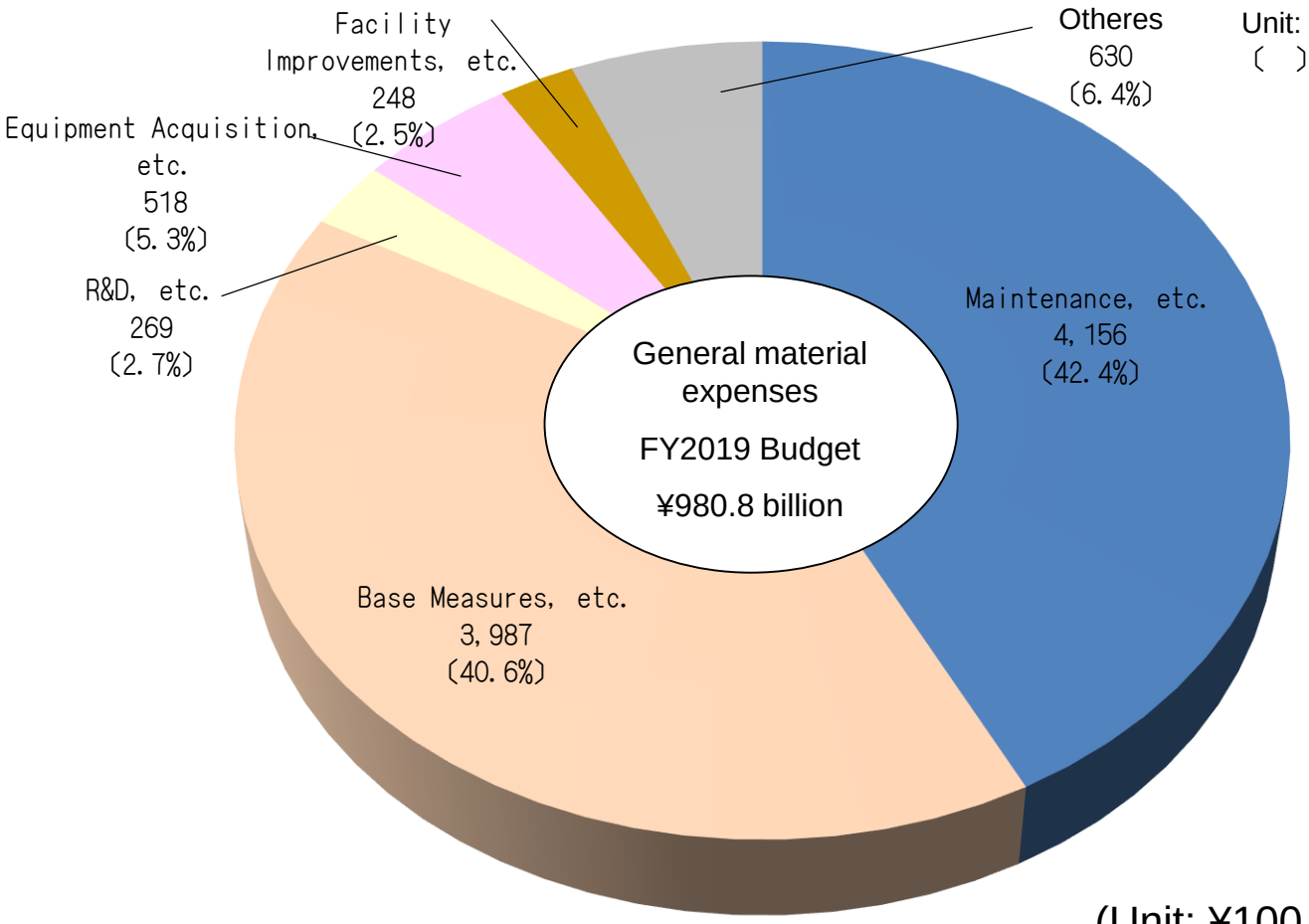
Concept for Future Obligation

The build-up of defense capabilities, such as procurement of major equipment including vessels and aircraft, as well as construction of hangars and accommodations for SDF personnel, may take several fiscal years. For this reason, the Ministry of Defense makes contracts for which the span is several fiscal years (up to five years, in principle), and, at the time of concluding a contract, makes an advance commitment to pay the expenses at a certain time in the future. Future obligation refers to the amount that will be paid in the fiscal year or years following the year the contract is concluded, in accordance with the contract of several fiscal years.

(e.g.) 10 billion worth of equipment is procured under a four-year contract



Details of General Material Expenses (activity expenses)

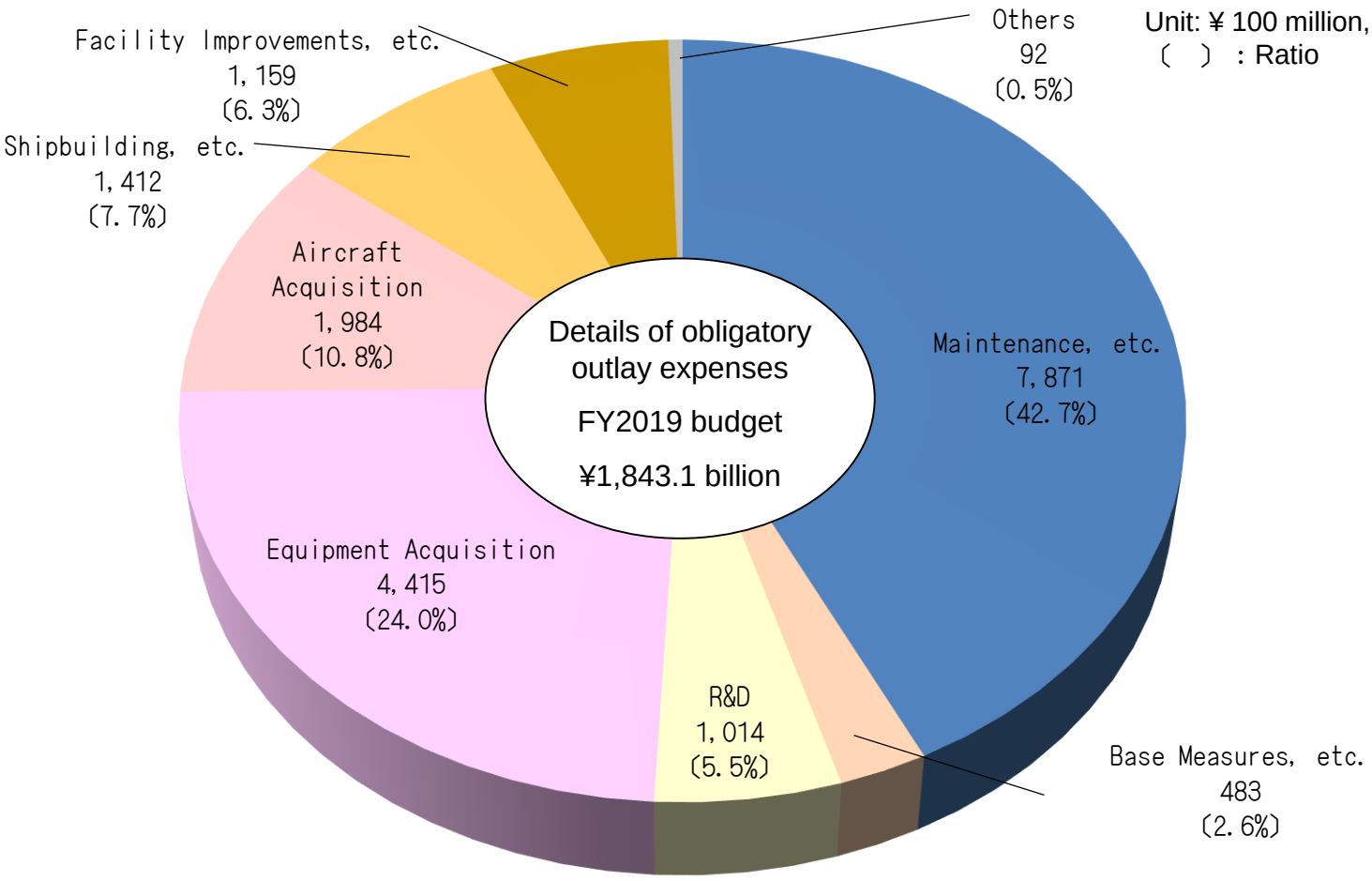


(Unit: ¥100 million)

Item	FY2018	FY2019	YoY Change
Maintenance, etc.	4,311	4,156	△155
• Petrol	897	942	45
• Repair	1,889	1,716	△173
• Education & training	285	280	△5
• Medical care, etc.	272	267	△5
• Utilities	968	951	△17
Base measures, etc.	4,051	3,987	△64
• Countermeasures in areas near bases	869	778	△91
• Host nation support	1,803	1,803	0
• Rent, compensation costs, etc.	1,380	1,406	26
Research & development	272	269	△4
Equipment procurement, etc.	257	518	261
Facility improvements, etc.	424	248	△176
Other (computer rentals, etc.)	632	630	△2
Total	9,949	9,808	△141

Note: 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.

Details of Obligatory Outlay Expenses

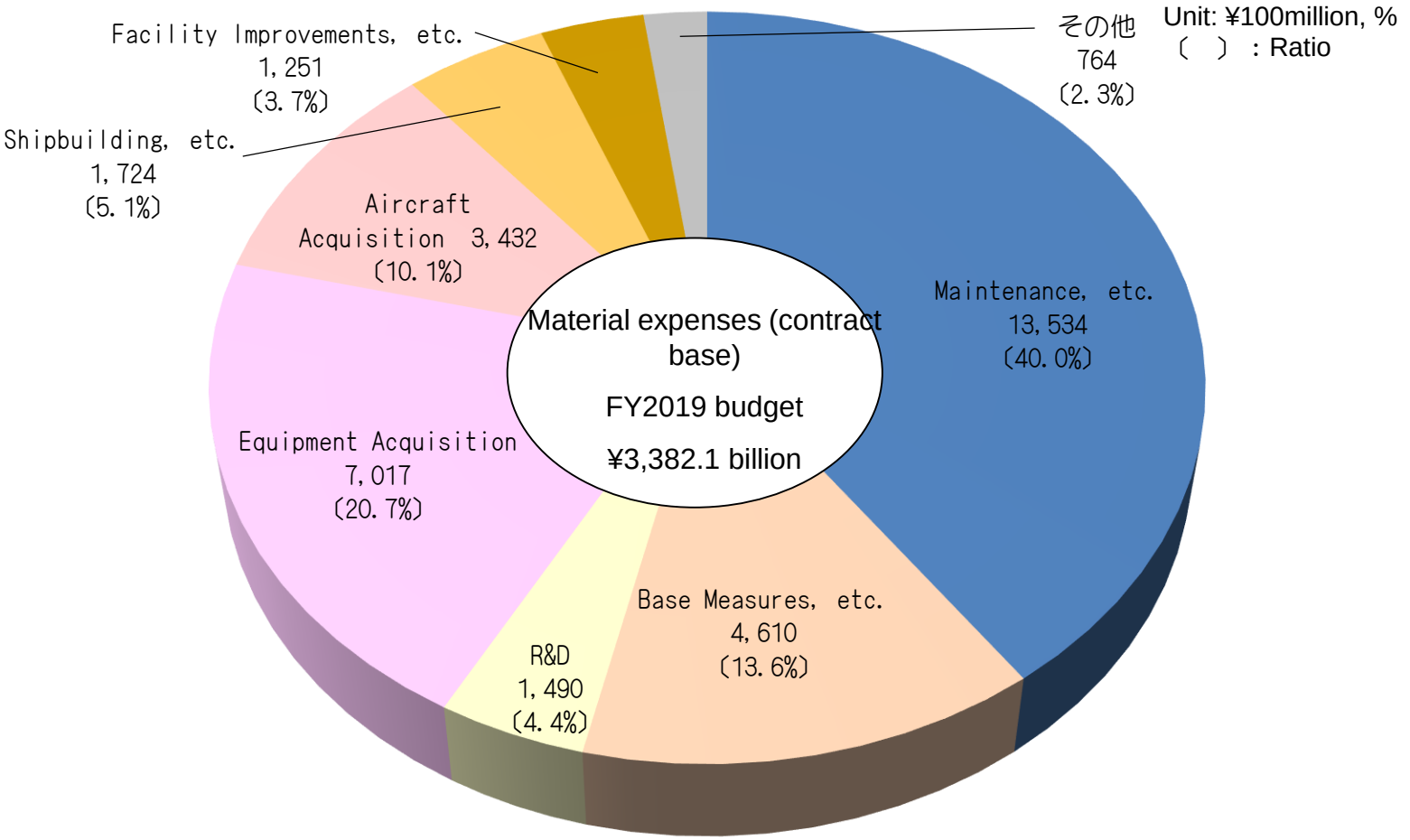


(Unit: ¥100 million)

Item	FY2018	FY2019	YoY Change
Maintenance, etc.	7,032	7,871	839
Repair	6,761	7,528	767
Education & training, etc.	271	343	72
Base measures	398	483	85
Research & development	762	1,014	252
Equipment procurement	3,400	4,415	1,015
Aircraft procurement	3,354	1,984	△1,370
Shipbuilding, etc.	1,179	1,412	233
Facility improvements, etc.	1,328	1,159	△169
Other (computer rentals, etc.)	135	92	△43
Total	17,590	18,431	841

Note: 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.

Details of Material Expenses (contract base)

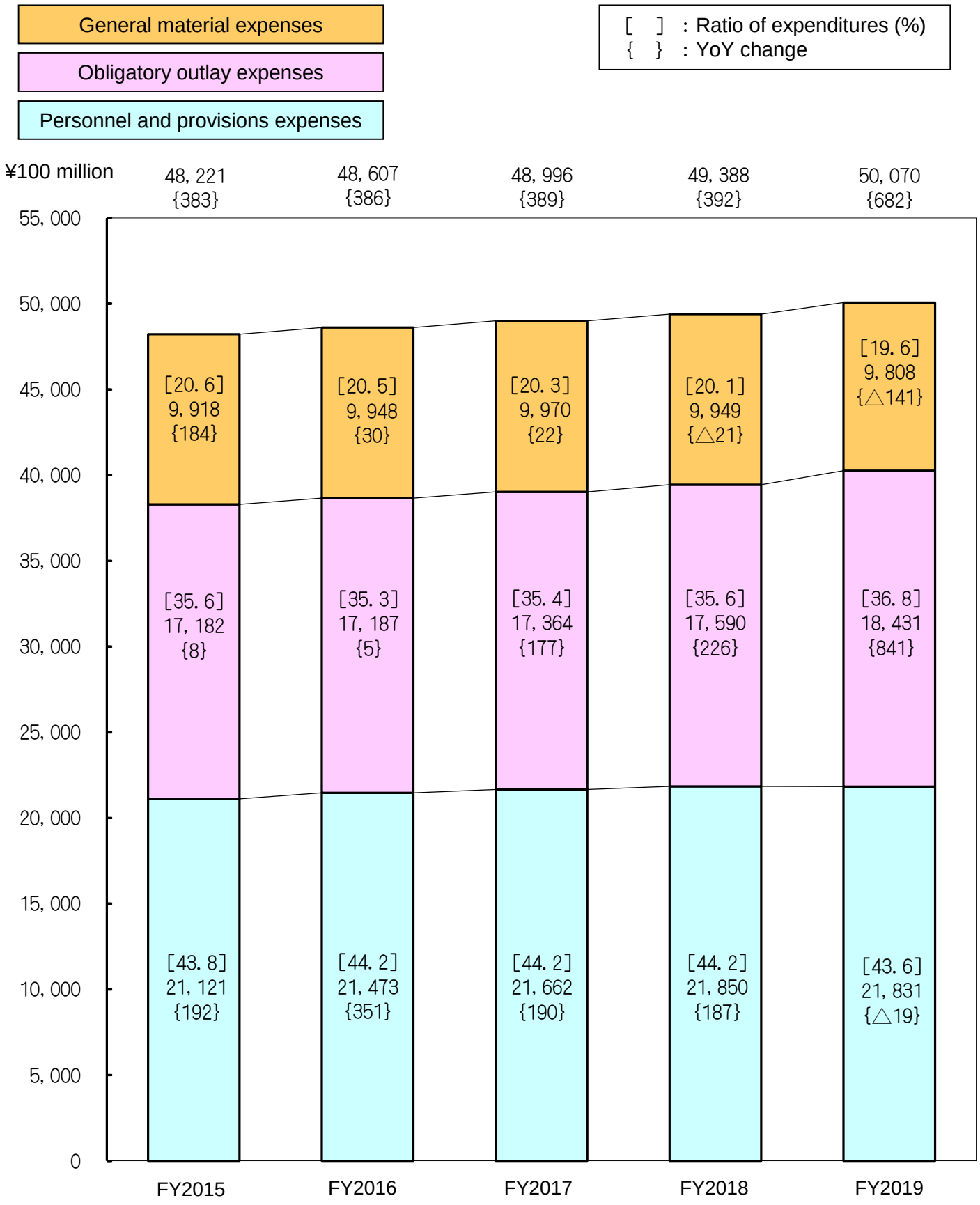


(Unit: ¥100 million)

Item		FY2018	FY2019	YoY Change
Maintenance, etc.		１２，２６１	１３，５３４	１，２７３
	Petrol	８９７	９４２	４５
	Repair	９，４９３	１０，７２６	１，２３３
	Education & training, etc.	１，８７１	１，８６６	△５
Base measures		４，６４２	４，６１０	△３２
Research & development		１，４４５	１，４９０	４５
Equipment procurement		４，４２２	７，０１７	２，５９５
Aircraft procurement		２，８３２	３，４３２	６００
Shipbuilding, etc.		１，７７７	１，７２４	△５４
Facility improvements, etc.		１，８０４	１，２５１	△５５３
Other (computer rentals, etc.)		７０４	７６４	６０
Total		２９，８８７	３３，８２１	３，９３４

Note: 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.

Changes in the Three Categories



Note: 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.

Breakdown by Organization

(Unit: ¥100 million, %)

Classification	FY2018 Budget	FY2019 Budget	YoY change	Growth rate
Defense-related expenses	49,388	50,070	682	1.4
Ministry of Defense	49,388	50,070	682	1.4
(Ministry of Defense Head Office)	47,893	48,333	441	0.9
GSDF	18,310	18,450	140	0.8
MSDF	11,433	12,247	814	7.1
ASDF	11,663	11,012	△652	△5.6
Subtotal	41,406	41,709	303	0.7
Internal Bureau	4,884	4,931	47	1.0
Joint Staff Office	440	521	81	18.4
Defense Intelligence Headquarters	718	703	△15	△2.2
National defense Academy	153	171	18	12.1
National Defense Medical College	255	267	12	4.6
National Institute for Defense Studies	28	25	△3	△10.1
Inspector General's Office of Legal Compliance	9	8	△2	△16.9
Subtotal	6,487	6,625	138	2.1
(Regional Defense Bureaus)	199	201	2	0.9
(Acquisition, Technology and Logistics Agency)	1,296	1,535	239	18.4

Note: 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.

Promotion of Measures for Bases

(Unit: ¥100 million, %)

Classification	FY2018 Budget	FY2019 Budget	YoY Change	Growth rate	Remarks
Promotion of base measures, etc.	< 4,642 > 4,449	< 4,610 > 4,470	< △ 32 > 20	< △ 0.7 > 0.5	
(1) Expenses for countermeasures in areas near bases	< 1,273 > 1,063	< 1,162 > 1,078	< △112 > 15	< △ 8.8 > 1.5	
Residential sound proofing	< 433 > 315	< 523 > 435	< 90 > 119	< 20.7 > 37.8	Subsidies for sound proofing work near air bases
Improvement of living environment of neighboring communities	< 840 > 747	< 639 > 643	< △201 > △104	< △23.9 > △13.9	Subsidies for living environment and facilities (river and road reconstruction, sound proofing systems in schools, improvements to sand control dam and public welfare facilities, etc.)
(2) Cost sharing for the stationing of USFJ	< 1,977 > 1,968	< 1,987 > 1,974	< 9 > 6	< 0.5 > 0.3	
Special Measures Agreement	1,492	1,497	4	0.3	
Labor cost	1,251	1,269	18	1.4	Labor cost of USFJ employees
Utilities	232	219	△ 13	△ 5.6	Cost of utilities used at USFJ facilities
Training relocation cost	9	9	△ 0	△ 2.7	Expenses related to U.S. field-carrier landing practice on Iwo To
Facilities improvement program	< 215 > 206	< 220 > 207	< 5 > 1	< 2.2 > 0.6	Improvement of USFJ facilities (barracks, family housing, etc.)
Measures for USFJ employees	270	270	0	0.0	Expense related to social insurance premiums by the employer
(3) Rent for facilities, compensation expenses, etc.	< 1,392 > 1,418	< 1,462 > 1,418	< 70 > △ 1	< 5.0 > △ 0.1	Rental cost of land used for defense facilities and compensation for loss of fisher's income, etc.

Note: The above figures are on an expenditure base (General material expenses + Obligatory outlay expenses), and figures in <> indicate a contract base amount. (Same in the following pages)

Special Actions Committee on Okinawa (SACO) Related Expenditures

(Unit: ¥100 million, %)

Item	FY2018 Budget	FY2019 Budget	YoY Change	Growth Rate	Remarks
					Implementation of measures included within the SACO Final Report
1 Project for land return	< 69 > 26	< 39 > 121	< △30 > 95	< △43.6 > 4.6 times	Construction and compensation, etc. to relocate the facilities provided for the land to be returned
2 Project for training improvement	< 17 > 16	< 24 > 27	< 7 > 11	< 37.9 > 68.9	Transportation of personnel, etc. required for the relocation of live-fire exercise previously conducted crossing Okinawa Prefectural Route 104
3 Project for noise reduction	< 5 > 8	< 1 > 0	< △5 > △8	< △88.6 > △96.9	Implementation of noise reduction initiative
4 Project for efficient SACO projects	< — > —	< 108 > 107	< 108 > 107	< Program started > Program started	
Total	< 91 > 51	< 172 > 256	< 80 > 205	< 88.0 > 5.0 times	

U.S. Forces Realignment Related Expenditures (mitigating the impact on local communities)

(Unit: ¥100 million, %)

Item	FY2018 Budget	FY2019 Budget	YoY Change	Growth Rate	Remarks
					Promote policies to accurately and efficiently implement measures related to realignment based on the "Government Efforts related to USFJ Structure Review" (approved by the Cabinet on May 30, 2006) and "Present Government Efforts towards Measures Approved by 2+2 in May 28, 2010" (approved by the Cabinet on May 28, 2010)
1 Okinawa USMC relocation to Guam	590	219	△371	△62.9	Necessary expenses, etc. for Okinawa USMC relocation to Guam
2 Project for realignment in Okinawa	<1,221> 879	<1,461> 875	<239> △5	<19.6> △0.5	
(1) Relocation of MCAS Futenma	<1,048> 816	<707> 611	<△341> △206	<△32.5> △25.2	Futenma Air Base relocation
(2) Return of land areas south of Kadena Air Base	<174> 63	<754> 264	<580> 201	<4.3 times> 4.2 times	Return of land areas south of Kadena Air Base
3 Relocation of carrier-based aircraft, etc.	<32> 195	<6> 7	<△26> △189	<△81.3> △96.6	
(1) MCAS Iwakuni	<29> 194	<—> —	<△29> △194	<Program started> Program started	Relocation of Carrier-based aircraft from Naval Air Facility Atsugi to MCAS Iwakuni, etc.
(2) Field carrier landing practice facility	<2> 2	<6> 7	<4> 5	<2.4 times> 4.0 times	Field carrier landing practice facility
4 Contingency use	<9> 2	<235> 13	<227> 11	<27.1 times> 7.7 times	Facility improvements for contingency use
5 Training relocation	84	95	11	13.0	Training relocation of U.S. aircraft to mainland Japan and Guam from Kadena Air Base and other airfields
6 Project for efficient relocation related measures	<329> 411	<525> 472	<196> 61	<59.5> 14.8	
(1) Realignment Grants	67	68	1	1.2	
(2) Measures for areas surrounding bases, etc.	<262> 344	<457> 404	<195> 60	<74.4> 17.4	
Total	<2,264> 2,161	<2,540> 1,679	<276> △482	<12.2> △22.3	

Overview of the 2nd Supplementary Draft Budget for FY2018 (Ministry of Defense)

Accumulated amount from Ministry of Defense
・・・・・・・・・ ¥399.8 Billion

1 Actions based on Three-Year Emergency Measures for Disaster Prevention/Reduction and National Resilience ¥13.1 Billion

Based on results, etc. of emergency inspection of important infrastructure, swiftly undertake measures as a first year of three-year emergency measures for disaster prevention/reduction and national resilience.

○ Improvement of SDF facilities (aseismic construction/upgrade of aging facilities) ¥6.8 billion
○ Development of private power generator (improvement of electric power supply capability) ¥3.5 billion
○ Upgrade of aging facility equipment (medium-sized dozer, truck crane) ¥800 million etc.

2 Securing Stable Operation of JSDF ¥382.2 Billion

Securing stable operations of the SDF in order to respond to security environment surrounding Japan and frequent natural disasters.

○ Development of Fighter aircraft (F-35A), fixed-wing patrol aircraft (P-1), transport aircraft (C-2), patrol helicopter (SH-60K), etc. ¥317.7 billion
○ Maintenance of vehicles, vessels, aircraft, etc. ¥3.2 billion
○ Increased petrol cost and barracks fuel cost because of increase in crude oil cost ¥31 billion
○ Expenditure related to extension of counter-piracy operations off the coast of Somalia and in the Gulf of Aden ¥1.3 billion etc.

3 Improving Living and Working Environment for SDF Personnel ¥76.4 billion*

Promote development of barracks, etc. to improve living and working environment for SDF personnel.

○ Improvement of barracks, etc. ¥74.9 billion*
○ Improvement of utilities (lockers for each room, washing machines, etc.), etc. ¥1 billion
○ Installation of equipment, etc. necessary for promoting employment of persons with disabilities ¥600 million* etc.


Improvement of Barracks


Improvement of Lockers, etc.


Improvement of Washing Machines

Note: Expenditures with * indicate a contract base amount.

Defense Programs and Budget of Japan

Overview of FY2019 Budget

Published in December 2018
Published by the Ministry of Defense
Finance Division, Minister's Secretariat
Defense Planning and Programming Division, Bureau of Defense Buildup Planning
Equipment Policy Division, Acquisition, Technology & Logistics Agency

5-1 Ichigaya-Honmuracho, Shinjuku-ku, Tokyo 162-8801
Tel. +81-3-3268-3111

防衛省
MINISTRY OF DEFENSE

URL:http://www.mod.go.jp