

防衛省

Ministry of Defense

Defense Programs and Budget of Japan

Overview of FY2021 Budget



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Overview of FY2021 Budget

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Concept of FY2021 Budget

1. Japan will steadily improve its defense capabilities as the third 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, the Self-Defense Forces (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.

Defense-Related Expense

Overall Defense-Related Expense

【Overall Defense-Related Expense (3 categories)】

(Unit:¥100million)

Categories	FY2021 Budget	Year on Year Change	FY2022 Budget	Year on Year Change
Defense-related expenses	5 0, 6 8 8 (5 3, 1 3 3)	6 1 8 [1. 2] (5 5 9 [1. 1])	5 1, 2 3 5 (5 3, 4 2 2)	5 4 7 [1. 1] (2 8 9 [0. 5])
Personnel and provisions expenses	2 1, 4 2 6	△ 4 0 5 [△ 1. 9]	2 1, 9 1 9	4 9 3 [2. 3]
Material expenses	2 9, 2 6 2 (3 1, 7 0 8)	1, 0 2 3 [3. 6] (9 6 4 [3. 1])	2 9, 3 1 6 (3 1, 5 0 4)	5 4 [0. 2] (△ 2 0 4 [△ 0. 6])
Obligatory outlay expenses	1 9, 3 3 6 (2 0, 3 2 6)	9 0 5 [4. 9] (6 5 1 [3. 3])	1 9, 3 7 7 (2 0, 3 7 8)	4 1 [0. 2] (5 2 [0. 3])
General material expenses *(activity expenses)	9, 9 2 6 (1 1, 3 8 2)	1 1 8 [1. 2] (3 1 4 [2. 8])	9, 9 3 9 (1 1, 1 2 5)	1 4 [0. 1] (△ 2 5 7 [△ 2. 3])

(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 do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience. The lower figures in parentheses indicate the expenses that include those above.
The amount of the SACO-related expenses is:
FY2020: ¥13.8 billion; FY2021: ¥14.4 billion
The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:
FY2020: ¥179.9 billion; FY2021: ¥204.4 billion
Expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience (FY2018 to FY2020) are:
FY2020: ¥50.8 billion.
4. FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥ 18.7billion)
Breakdown of the expenditure :personnel expenses : ¥40 million, Obligatory outlay expenses : 13.7 billion, general material expenses : 4.9 billion

【 Future Obligation Concerning New Contracts 】

(Unit:¥100million)

Category	FY2020 Budget	Year on Year Change	FY2021 Budget	Year on Year Change
Future obligations concerning new contracts	2 4, 0 5 0 (2 5, 6 3 3)	3 7 [0. 2] (△ 1 4 9 [△ 0. 6])	2 4, 0 9 0 (2 5, 9 5 1)	4 0 [0. 2] (3 1 8 [1. 2])

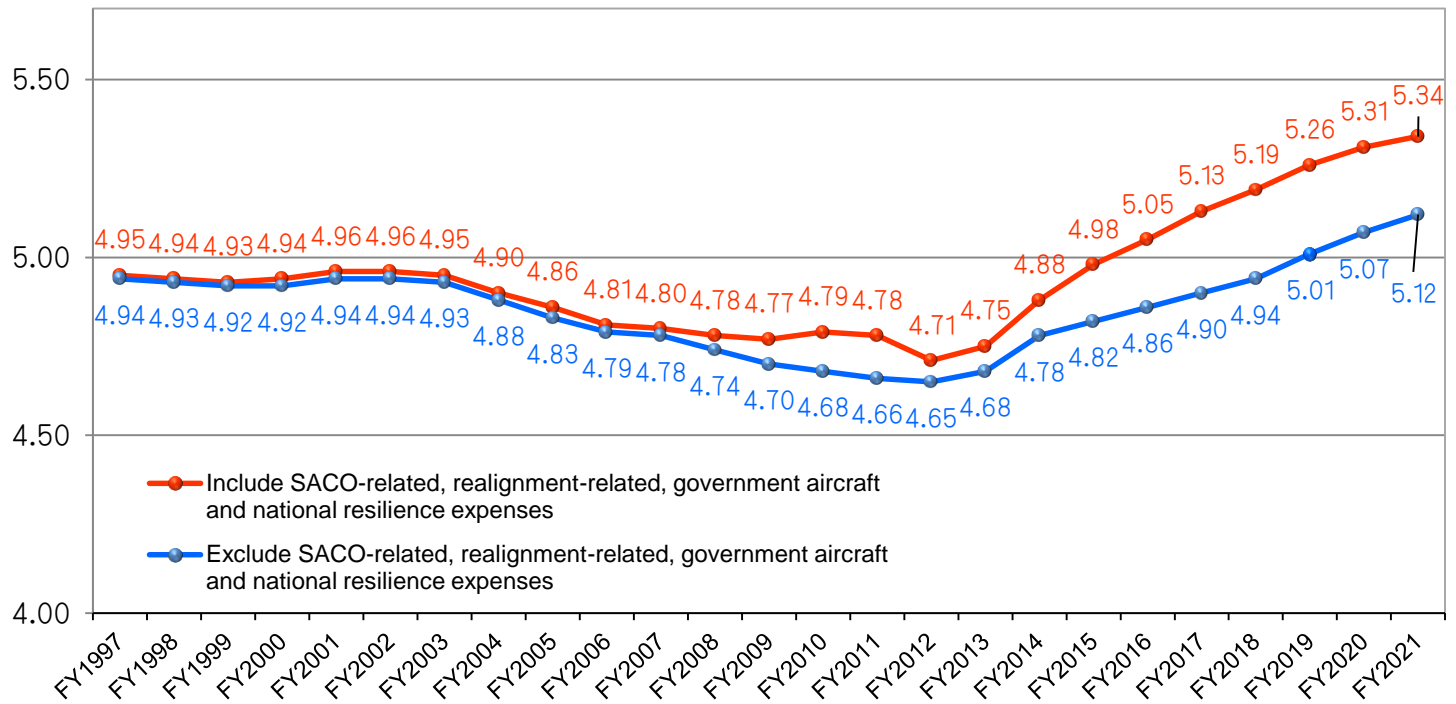
(Note)

1. []: growth rate (%).
2. The upper figures in each cell do not include SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities). The lower figures in parentheses indicate the expenses that include those above.
The amount of the SACO-related expenses is:
FY2020: ¥6.9 billion; FY2021: ¥3.5 billion
The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:
FY2020: ¥151.3 billion; FY2021: ¥182.6 billion
3. FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥21.7 billion)

Changes in the Defense-Related Expense

Changes in the Total Amount

(Unit: ¥1 trillion)



Changes in the Growth Rate

(Unit : %)

Category	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Include SACO-related, realignment-related, government aircraft and national resilience expenses	2.1	△ 0.2	△ 0.2	0.1	0.4	0.0	△ 0.1	△ 1.0	△ 1.0	△ 0.9	△ 0.3	△ 0.5	△ 0.1
Exclude SACO-related, realignment-related, government aircraft and national resilience	2.0	△ 0.3	△ 0.2	0.0	0.3	0.0	△ 0.3	△ 1.0	△ 1.0	△ 0.8	△ 0.2	△ 0.8	△ 0.8

Category	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Include SACO-related, realignment-related, government aircraft and national resilience expenses	0.3	△ 0.3	△ 1.3	0.8	2.8	2.0	1.5	1.4	1.3	1.3	1.1	0.5
Exclude SACO-related, realignment-related, government aircraft and national resilience	△ 0.4	△ 0.4	△ 0.4	0.8	2.2	0.8	0.8	0.8	0.8	1.4	1.2	1.1

Note 1 : The above figures are on expenditure base

Note 2 : FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥18.7 billion)

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 the security environment surrounding Japan becomes more severe and uncertain at remarkably fast speeds.

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

In order to realize cross-domain operations, the 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.

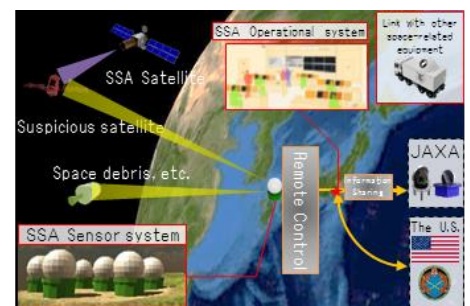
(1) Capabilities in Space Domain

Space-related budget: ¥ 65.9 billion*

* Excluding the portion related to ballistic missile defense (BMD) allocated for space

Enhancement of SSA (*)

- Procurement of SSA satellite (space-based optical telescope) (¥17.5 billion)
 - Start to design the SSA satellite that is scheduled to be launched in FY2026
 - Conceptual study on operation of multiple SSA satellites
 - Research on On-orbit satellite servicing
- Development of SSA systems (¥11.3 billion)
 - Procure necessary related components to perform SSA in cooperation with the U.S. and the relevant domestic organizations



Enhancing of SSA (conceptual image)

* SSA: Space Situational Awareness

Study on utilization of satellite constellations for missile defense

- Study on concept of HGV detection and tracking systems utilizing satellite constellation (¥ 0.2 billion)
 - * HGV: Hypersonic Glide Vehicle
- Research on infrared sensor with high sensitivity and broad detection range (¥1.2 billion)

Enhancing Space Resilience

- Enhance resiliency of satellite communication system (¥0.9 billion)
 - Develop a system that enables seamless interoperability between X-band defense communication satellites and other commercial communication satellites
- Enhance resiliency of satellite positioning capability by utilizing “QZSS” (¥0.4 billion)
 - Research on multi-GNSS (Global Navigation Satellite System) receiver
Research on a common receiver for positioning signals from Michibiki (including dedicated public signals*), GPS, and Galileo in order to improve the resilience of satellite positioning capability
 - * Dedicated public signals: Signals that can only be used by government-approved users

Strengthening Information-Gathering Capability Using Outer Space

- Use of data from imagery satellites (¥15.1 billion)
 - Procurement of data for image analysis (various commercial satellites, including small satellite constellations which allow frequent imaging)
 - Acquiring satellite information which contributes to maritime surveillance
- Utilize of satellite communication (¥9.6 billion)
 - Development and maintenance of X-band defense communication satellite
 - Leasing of commercial communication satellite lines, development and maintenance, etc. of satellite communication equipment



*X-band defense communication satellite
(conceptual image)*

Enhancement of the System

- Establish “Space Operations Group (tentative name)”
Establish a new command and control unit in the space domain, and create the Space Operations Group (tentative name) with this unit and the Space Operation Squadron as subordinate units
- Establish the “Outer Space Project Management Section (tentative name)” under the Project Management Division (Communications and Electronic Systems, Ordnance and Vehicles), and changing the division name to “Project Management Division (Outer Space and Land Equipment) (tentative name)” of the ATLA for the management of space-related projects



Logo for Space Operations Squadron

Other Measures Related to Space Policy

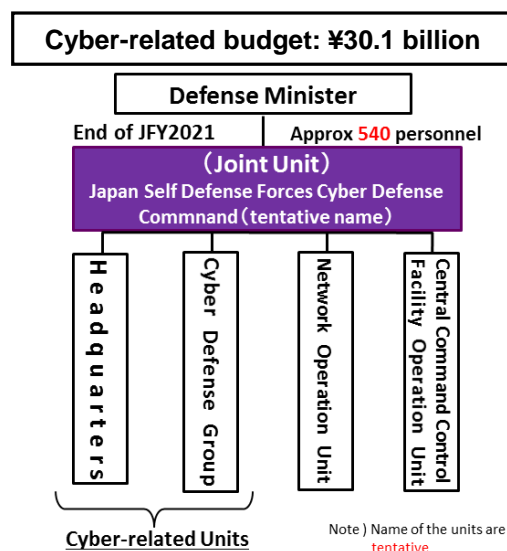
- International cooperation with other countries (¥0.2 billion)
 - Acquire knowledge concerning matters related to outer space by dispatching personnel to “Space 100” or other courses provided at a U.S. Air Force base in the Colorado, U.S.
 - Participate in multilateral table-top exercises in the field of outer space

* Budget related to BMD (only the space-related portion): ¥53.2 billion

(2) Capabilities in Cyber Domain

Enhancing Posture of Cyber Defense Group, etc.

- Abolishment of the C4SC (Command, Control, Communication & Computers Systems Command) and establishment of the Japan Self- Defense Force Cyber Defense Command (tentative name).
Integrate the cyber protection functions by transferring personnel from the cyber-related units of the GSDF, MSDF and ASDF to the JSDF Cyber Defense Command, with a view to fundamentally strengthening cyber defense capabilities and enabling more effective and efficient mission execution.



Securing/Developing Cyber Workforce

- Recruitment of the Chief Cyber Security Advisors(tentative name)(high-level cyber security personnel) (¥20 million)
Recruit private-sector talents with advanced knowledge in cyber security, including the latest cyber technologies and trends in cyber domain.
- Development of a highly skilled workforce in cyber security(¥7 million)
Conduct training at external educational institutions to accelerate the development of a highly skilled workforce with advanced cyber security knowledge and skills
- Expansion and improvement of the common cyber course at the GSDF Signal School (¥60 million)
Expand the scale of the common cyber education program, which has been implemented for the GSDF, MSDF and ASDF since FY2019, to promote human resources development in an integrated manner
- Participation in the U.S. Cyber Commander Education Courses (¥30 million)
Participate in courses at the U.S educational institutions such as National Defense University (NDU) to learn knowledge required for the commanders of cyber warfare

Establish the JSDF Cyber Defense Command (tentative name) (conceptual image)



Common cyber course (conceptual image)

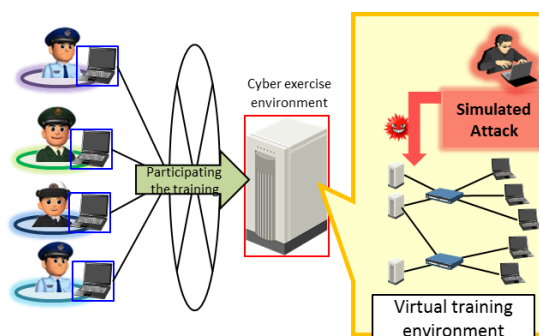
Utilizing Cutting-Edge Technology in the Field of Cyberspace

- Study of technology for responding to cyber attacks targeting intelligence processing system within equipment (¥0.9 billion)
Conduct research on cyber resilience* technology for equipment to ensure continuous operation by information processing systems of the MOD/SDF's equipment even under cyber attacks

*Cyber resilience: The ability to flexibly respond to the event of a partial functional failure of a system or network due to a cyber attack, etc., and quickly recover to the operational state.

Developing Practical Training Environment

- Development of cyber training environment (¥1.6 billion)
Install practical training equipment for all cyber-related units of the SDF and conduct practical training on response to cyber attacks.



Operation of cyber training environment (conceptual image)

Improving Security of System Networks

- Improvement of cyber protection analyzing devices (¥4.8 billion)
Improve devices in order to gather and analyze information on the tactics, techniques and procedures (TTPs) of cyber attacks, and respond to cyber attacks against the MOD/SDF
- Utilization of external resources in dealing with cyber attacks (¥2.7 billion)
Leverage external resources for tasks requiring a high level of expertise in dealing with cyber attacks
- Improvement of the Defense Information Infrastructure (DII) (closed) (¥8.1 billion)
Improve the closed system of the DII to prevent cyber attacks by intruders.

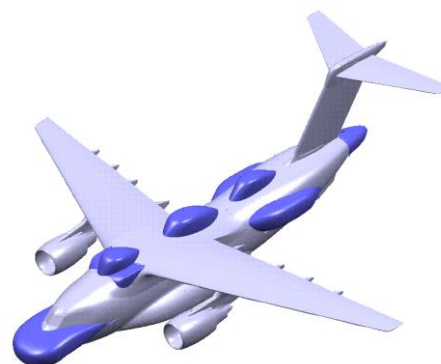
Reinforcement of Measures on Information Security

- Establishment the “Industrial Cybersecurity Office (tentative name)” in the Equipment Security Establish Management Division of the ATLA in order to promote various information security measures for the defense industry

(3) Capabilities in Electromagnetic Domain

Reinforcement of Capabilities for Neutralizing the Radar of an Opponent Invading Japan

- Development of stand-off electronic warfare aircraft (¥10 billion)
Develop stand-off electronic warfare aircraft to support SDF air operation by conducting effective communication jamming
- Procurement of network electronic warfare system (1 set: ¥8.7billion)
Procure the GSDF’s network electronic warfare system to have an advantage in operations by collecting and analyzing signals and neutralizing communication
- Study of naval vessels’ radio detection and jamming capabilities (¥20 million)
Demonstrate and verify the improved capabilities of radio detection and jamming devices, which detect and emit radio waves from aircraft and missiles to neutralize them.



Development of stand-off electronic warfare aircraft



Network electronic warfare system

Strengthening Capability to Minimize Electromagnetic Jamming from an Opponent Attempting to Invade Japan

- Procurement of fighters (F-35A) (4 fighters: ¥39.1 billion)
Procure F-35A with superior electronic protection capability to secure air superiority.
Include another ¥53.4 billion in the request as other related cost (maintenance equipment, etc.)
- *Owing to the cost-reduction efforts by acquiring proficiency in and streamlining the work, it was confirmed that the final assembly and checkout (FACO) process conducted by the Japanese company costs less than importing finished products. Considering that, the F-35A procurement in the FY2021 will go through the FACO process conducted by the Japanese company in the same way as in the FY2019 and 2020.



Fighter (F-35A)

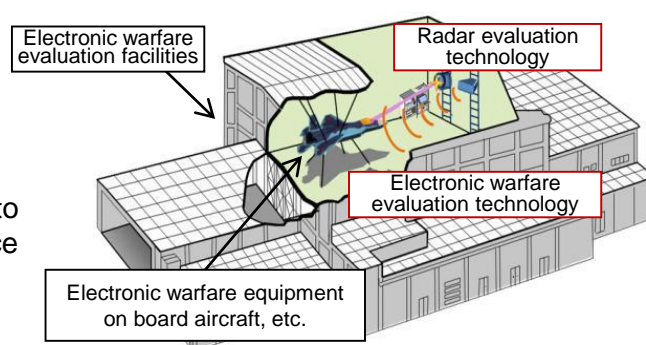
- Procurement of fighters (F-35B) (2 fighters: ¥25.9 billion)
Procure F-35B with superior electronic protection capability and STOVL capability to improve flexibility of fighter operation
Include another ¥6.2 billion as other related cost (maintenance equipment, etc.)



Fighter (F-35B)

- Research on decoy systems for naval vessels (¥20 million)
Conduct research on future naval decoys to respond to the threat of high-performance anti-ship missiles

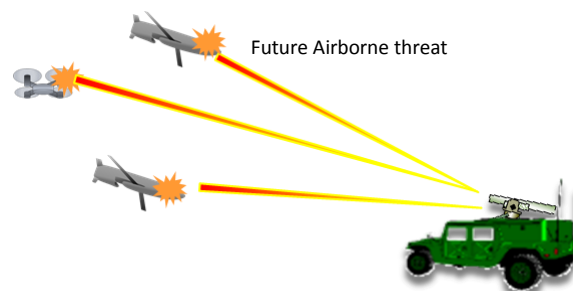
- Research on electronic warfare evaluation technology (¥1.2 billion)
Study future electronic warfare evaluation systems to accurately understand and evaluate the performance of increasingly sophisticated electronic warfare devices and equipment



Research on electronic warfare evaluation technology (conceptual image)

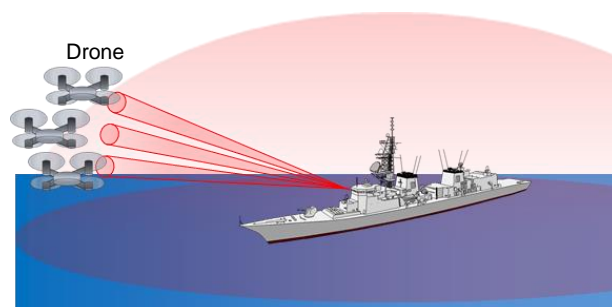
Research on Potentially Game-Changing Technologies in the Electromagnetic Domain

- Demonstration of vehicle-mounted laser system (¥2.8 million)
Demonstrate vehicle-mounted laser system, which are assumed to respond efficiently to the future airborne threat by utilizing the result of research on high-power laser system.



Demonstrate vehicle-mounted laser system (conceptual image)

- Research on HPM generator (¥0.5 billion)
Conduct research on miniaturization and enhancement of high-powered microwave (HPM) generators for future practical use



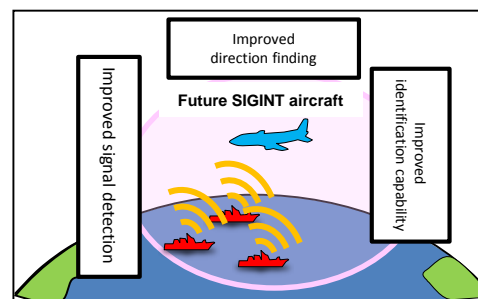
Research on high power microwave (HPM) generator (envisioned image of the ship-based system)

Strengthening Intelligence Capability Related to Electromagnetic Spectrum

- Procurement of devices mounted on radio wave information gathering aircraft (RC-2) (¥6.9 billion)
Enhance the information gathering function, obtain a reconnaissance aircraft with improved capabilities, including an expanded frequency range of radio wave intercept and enhanced long-distance target collection capability, as a successor to the current radio information collector (YS-11EB)
- Research on information gathering system for the next generation electronic intelligence gathering aircraft (¥2.7 billion)
Conduct research to improve the signal detection, direction finding, and identification capabilities of the information-gathering system for aircraft systems towards development of a successor (next-generation electronic information-gathering system) to the EP-3, which is expected to be decommissioned in the future.



Radio wave information gathering aircraft ((RC-2)



Research on information gathering system for next generation electronic intelligence gathering aircraft (conceptual image)

Strengthening Posture of Communication and Information Sharing

- Improvement of the Tactical Datalink (¥10.7 billion)
Improve the tactical datalink of aircraft and vessels for swift forwarding/sharing of the target information

Protection of Facilities from Electromagnetic Pulse (EMP) Attacks, etc.

- Study of maintenance methods to stably keep and maintain the electromagnetic pulse (EMP) protection of SDF facilities (¥40 million)

Training/Exercise, Developing Personnel

- Joint electronic warfare training (¥20 million)
Conduct joint electronic warfare training among the GSDF, MSDF, and ASDF to enhance operational capabilities in the electromagnetic domain
- Participation in table-top exercise hosted by the Royal Navy (¥4 million)
Participate in comprehensive exercise including electromagnetic domain hosted by the Royal Navy
- Dispatching personnel to an educational course of electronic warfare in the U.S. (¥4 million)
Dispatch personnel from the ASDF to the electronic warfare operation course for officers conducted in the U.S. and acquire command and control capability regarding operation in electronic warfare.
- Participation in electronic warfare symposium held in the U.S., etc. (¥2 million)
Dispatch personnel to electronic warfare symposia held in the United States and other countries to collect information on the latest electronic warfare technologies



Joint electronic warfare training (conceptual image)

(4) Others

Initiatives towards introduction of 5G

- Demonstrational experiment of 5G (¥0.4 billion)
Establish provisional 5G network environment in ASDF Chitose base, etc. and conduct demonstrational experiment toward the smartification of base, etc.

2 Enhancing Capabilities in Traditional Domains

The SDF will enhance capabilities in maritime and air domains, stand-off defense capability, comprehensive air and missile defense capability and maneuvering 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)

- Improvement of capability of the Japan Aerospace Defense Ground Environment (JADGE) (¥22.1 billion)
Improve detection/identification and information processing capabilities to respond to airborne threats through centralized command and control.

- Procurement of fixed-wing patrol aircraft (P-1)
(3 aircraft: ¥66.6 billion)
In response to decommissioning of existing fixed-wing patrol aircraft (P-3), procure P-1s as its successor.



Fixed-wing patrol aircraft (P-1)

- Life extension of fixed-wing patrol aircraft (P-3C)
(4 aircraft: ¥1.5 billion)
Implement life extension measures for P-3Cs to maintain the number of fixed-wing patrol aircraft.



Fixed-wing patrol aircraft (P-3C)

- Refurbishment of a patrol helicopter (SH-60K) to rescue specification (1 helicopter: ¥1 billion)
Refurbish an SH-60K to rescue specification to maintain rescue capability.
- Life extension of patrol helicopters (3 helicopters: ¥7.1 billion)
Implement life extension measures for SH-60Ks to maintain the number of patrol helicopters.



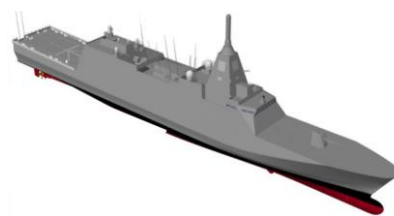
Patrol helicopter (SH-60K)

- Procurement of a search and rescue amphibian (US-2)
(1 amphibian: ¥7.1 billion)
Procure US-2 to maintain rescue capability at sea.



Search and rescue amphibian (US-2)

- Construction of destroyers (2 ships: ¥94.4 billion)
Construct two destroyers (seventh and eighth ships of FFM (3,900t class) built in FY2018), equipped with compact hulls and improved multirole capability (such as mine countermeasures, which were conventionally served by minesweeping vessels); bringing the total number of destroyers to 54.



*FY2021 destroyer (3,900t)
(conceptual image)*

- Life extension of destroyers
(life extension for 4 ships and parts procurement for 4 ships: ¥12.3 billion)
Implement life extension measures for the Murasame-class, Kongo-class and Abukuma-class destroyers to maintain the number of destroyers.

- Construction of a submarine (1 ship: ¥68.4 billion)
Conduct information gathering in the waters around Japan with 22 submarines
 - Construct a submarine (fifth ship of new class ship (3,000t class) built in FY2017) with enhanced capability (detection, etc.) to effectively carry out warning and surveillance activities



*FY2021 submarine (3,000t)
(conceptual image)*

- Life extension of submarines (life extension for 9 ships and parts procurement for 4 ships: ¥6.4 billion)
Implement life extension measure for Oyashio-class and Soryu-class submarine to increase the total number of submarines from 16 to 22



*Soryu-class submarine
(2,900 t)*

Obtaining and Maintaining Air Superiority

- Procurement of fighters (F-35A) (4 fighters: ¥39.1 billion)(repost)
- Procurement of fighters (F-35B) (2 fighters: ¥25.9 billion)(repost)

- Improvement of capability of fighters (F-2) (¥3 billion)
Designing to upgrade current fighters, improve anti-ship capability and networking capability in order to provide effective defense against surrounding countries' modernized maritime and air forces as well as fulfilling various duties.



Fighter (F-2)

- Procurement of rescue helicopters (UH-60J)
(5 helicopters: ¥26.1 billion)
Dealing with decreasing number of UH-60Js in the ASDF, and to maintain/improve the number of rescue helicopters as well as improve the posture to effectively respond to various situations.



Rescue helicopter (UH-60J)

- Refurbishment of Izumo-class destroyers (¥20.3 billion)
For the safe operation of the F-35B, apply high temperature resistant coating on the flight deck and change the shape of the bow to square.



Destroyer "Kaga"

- Procurement of Type-03 Medium-Range Surface-to-Air Missile (modified) (1 set: ¥12 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)

F-X (approx. ¥73.1 billion [including related expenses])

- Development of F-X, etc. (¥57.6 billion)
Steadily develop F-X, continuing the conceptual design of the aircraft and starting on the design of the engine, etc.
- Research on the integration of the mission system of a fighter aircraft (¥4.9billion)
Conduct research on the integration technology of the mission system ,which is a basis of operation / mission execution capabilities, to control mission system freely through the life cycle.
- Research on technologies used for remotely-operated support aircraft (¥1.5 billion)
Conduct research related to human machine interface technology necessary to formation flight technology and ,remote-control ,which are required for future remote-control support aircraft that can assist manned aircraft.
- Research on advanced radar technology (¥4.1 billion)
Establish future high performance radar technology for use in airborne applications, which can operate over a wide frequency range and simultaneously provide wide angular coverage, through UK-Japan joint research.

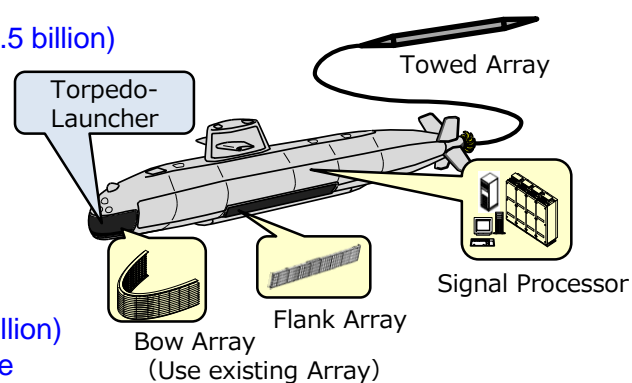
Obtaining and Maintaining Maritime Superiority

- Development of sonar system for future submarines (¥3.5 billion)

Develop sonar system with improved detection capability to ensure and maintain the advantage of the SDF submarines in the underwater domain for the future.

- Research on a noise-reducing torpedo-launcher (¥1.8 billion)

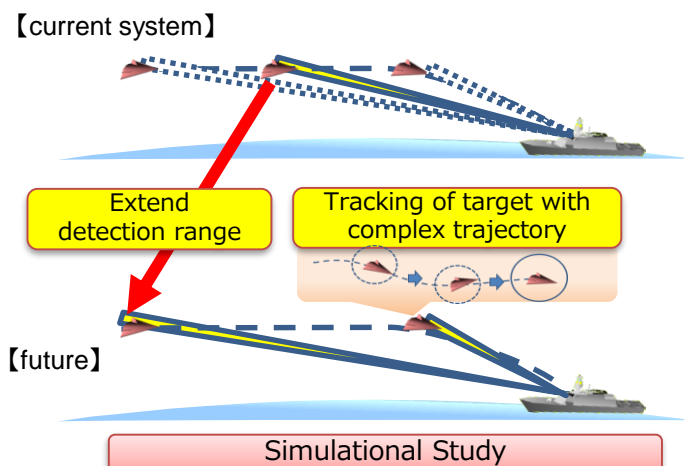
Research on reducing sound of torpedo-launcher to make submarines even quieter.



Sonar system for future submarines and noise-reducing torpedo-launcher (conceptual image)

- Research on high-speed, high-maneuvering radar technology (¥0.6 billion)
Promote simulational research for the improvement of radar detection and tracking, and extension of the detection range of high-speed, high-maneuvering targets, such as low RCS* targets and hypersonic missiles.

* RCS: Radar Cross Section



Research on high-speed, high-maneuvering radar technology(conceptual image)



Type-12 surface-to-air guided missiles

- Procurement of Type-12 surface-to-air guided missiles (1 set: ¥5.5 billion)
To enhance the anti-air combat capability, acquire Type-12 surface-to-air guided missiles with improved capabilities compared to the current Type-88 surface-to-air guided missiles.

(2) Stand-off Defense Capability

- Procurement of stand-off missile (¥14.9 billion)
Procure stand-off missile (JSM) which can react from outside of the opponent's threat range and can be mounted on F-35A.
- Procurement of fighters (F-35A) (4 fighters: ¥39.1 billion)(repost)
- Development of upgraded Type-12 surface-to-air guided missile (¥33.5 billion)
Extend the shooting range of Type-12 surface-to-air guided missile (modified), which are currently under development, and develop them as a stand-off missile that can be operated from various platforms.
- Research on Hyper Velocity Gliding Projectile (HVGP) for defense of remote islands (¥15 billion)
Continue research on HVGP which glide at high speed and hit the target with high accuracy aiming for early practical use.

(3) Comprehensive Air and Missile Defense Capability

BMD-related budget: ¥114.8 billion

Enhancement of Network Functions

- Improvement of capability of electronic warfare information of the Japan Aerospace Defense Ground Environment (JADGE) (¥22.1 billion)(repost)
Enhance capabilities to deal with ballistic missiles that fly at low altitudes in an irregular orbit, etc.
- Research on the feasibility of linking FC networks to CEC (¥200 million)
Conduct technical verification of the feasibility of interconnection between the FC network to be installed on Japanese general-purpose destroyers and the CEC to be installed on Maya-type destroyers, etc.

Enhancement and Increase in the Number of Shooters and Guided Missiles

- Procurement of enhanced capability type PAC-3 missiles (PAC-3MSEs) (¥35.6 billion)
Procure PAC-3MSEs capable of both BMD and response to cruise missiles and aircrafts, as well as with extended shooting range
- Research on improvement of capability of Type-03 Medium-Range Surface-to-Air Missile (modified) (¥100 million)
Conduct research on the destruct effect of ballistic missile warheads through direct hit-to-kill technology.
- Procurement of Type-03 Middle-Range Surface-to-Air Missile (modified) (1 set: ¥12 billion)(repost)
- Research on HGV intercept system (¥40 million)
Conduct research on the design of interceptor missiles to effectively deal with hypersonic glide weapons



PAC-3 MSE (Photo: same model)

Improvement of Capability of Sensors

- Study on concept of HGV detection and tracking systems utilizing satellite constellation (¥200 million)(repost)
- Research on infrared sensor with high sensitivity and broad detection range (¥1.2 billion)(repost)
- Research on high-speed, high-maneuvering radar technology (¥0.6 billion)(repost)

Others

- BMD exercises
Maintain and improve SDF's capabilities of BMD and Japan-U.S. bilateral response capabilities
- Technical assistance service related to the study of Aegis system-equipped vessel (¥1.7 billion)
Obtain expertise and technical assistance from private entities for the consideration of functions to be integrated on the Aegis system-equipped vessel, vessel design, and others.

(4) Maneuvering and Deployment Capability

- 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.



Training of joint transportation using PFI ships

- Joint exercises for amphibious operations
Aim to improve SDF's tactical skill in amphibious operation and contribute to joint operation.



Joint exercise for amphibious operations

- Procurement of transport aircraft (C-2)
(1 aircraft: ¥22.5 billion)
In view of the decreasing number of current transport aircraft (C-1), procure transport aircraft (C-2) that contribute to the large-scale deployment by improving flight range and payload.



Transport aircraft (C-2)

- Research on succeeding equipment to light armored vehicles (¥1.4 billion)
Acquire references that help the selection of a vehicle to replace the light armored mobile vehicle that will ensure the unit's mobility and deployment capabilities.



Succeeding equipment to light armored vehicles (conceptual image)

- Procurement of Type-16 mobile combat vehicles (22 vehicles: ¥15.8 billion)
Strengthen rapid deployment capability of the basic operational units (rapid deployment division and brigade) by deploying Type-16 mobile combat vehicles suitable for rapid and agile operation in various situations.



Type-16 mobile combat vehicle

- Procurement of new utility helicopter (UH-2) (7 helicopters: ¥12.5 billion)
As the successor utility helicopter (UH-1J), procure new utility helicopters (UH-2) which can conduct airborne maneuver and transport, and deploy units immediately.



New utility helicopter (UH-2)

- Development of facilities related to deployment of area security unit in the southwestern (¥39 billion)
In order to enhance the initial response readiness in the defense of remote islands, develop barrack and other SDF facilities related to the deployment of guard unit in Ishigaki Island, roads etc. within the Bora area in Miyako Island, and ammunition depot in Amami Island (Setouchi-detachment).



Key facilities related to deployment of units (conceptual image)

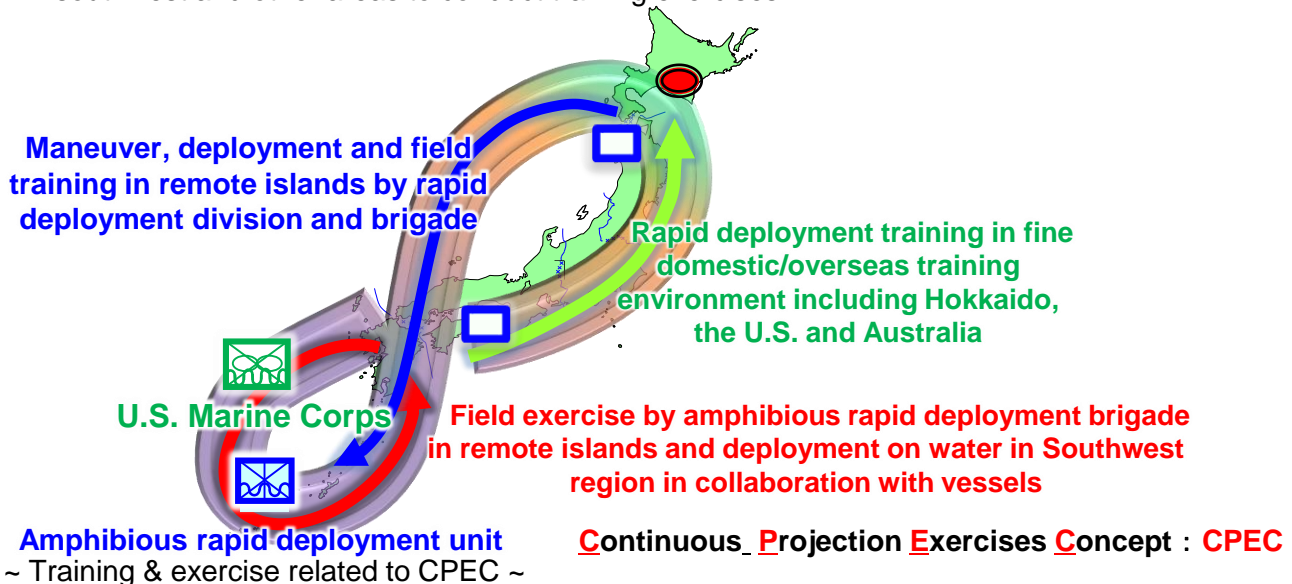
- Development of facilities related to deployment of Tactical Airlift Wing (¥2.5 billion)
Expenses for the procurement of land, site survey and fundamental study necessary for the construction of Saga Garrison (tentative name).

- Development of facilities in Sasebo (Sakibe East Area [tentative name]) (¥13.3 billion)
Develop a large-scale wharf and logistical support facilities in the Sakibe East area (tentative name), positioned as the base for logistical support in the southwest.



Sakibe East Area (tentative name) (conceptual image)

- Continuous Projection Exercises Concept (CPEC)
Improve deterrence and response capabilities by deploying highly trained GSDF units to the southwest and other areas to conduct training exercises.



- Exercise of GSDF (¥2.2 billion)
To enhance mission conducting capability of GSDF and effectiveness of its operation, conduct joint exercise based on the rapid deployment training, field exercise of regional armies etc. which were carried out by each regional army, in order to effectively respond to various disasters.
- Rapid deployment training in fine domestic/overseas training environment including Hokkaido, the U.S. and Australia
 - Operation of Hokkaido Training Center (¥700 million)
Conduct a field exercise for ordinary regiments and other units of various professions to qualitatively evaluate command and staff activities as well as objectively and numerically evaluate battles to improve the skill level required for cooperation among various professions.
 - Field exercises with the U.S. Force in the U.S., etc. (¥800 million)
Maintain and improve tactical skills to enhance the capability to swiftly response to various situations by dispatching units to the U.S. and other countries which have effective training facilities and practicing mutual coordination procedures.
 - Field exercises with the U.S. and Australian Forces in Australia (¥200 million)
Contribute to peace and stability in the Indo-Pacific region by conducting Japan-U.S.-Australia multilateral field training to improve the tactical skill of personnel/units and strengthen cooperation among the three countries.
- Maneuver, deployment and field training in remote islands by rapid deployment division and brigade
 - Field exercises with the U.S. Force in Japan (¥40 million)
Improve the Japan-U.S. joint response capability through field training according to the mutual cooperation guidelines in which the GSDF and U.S. military units are to jointly carry out an operation following instructions from their respective command systems.
- Field exercises by amphibious rapid deployment brigade in remote islands and deployment on water in Southwest region in collaboration with vessels
 - Exercises for amphibious rapid deployment brigade (¥50 million)
To effectively react to various situations such as attacks on remote islands, make efforts to further enhance the capability of the amphibious rapid deployment brigade.



Training utilizing fine environment in Hokkaido (conceptual image)



Field exercises with the U.S. Force overseas



Maneuver and deployment by rapid deployment division and brigade



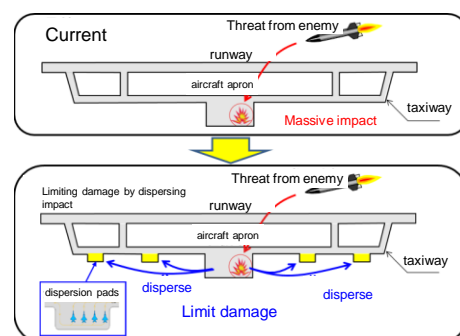
Maneuver exercise on the water in Southwest region

3 Strengthening Sustainability and Resiliency

In order to be able to operate units continuously in all stages from peacetime to armed contingencies, the 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, the MOD/SDF will promote measures to ensure high operational availability of equipment.

(1) Securing Continuous Operations

- Procurement of various ammunition necessary for continuous unit operation (¥229.3 billion)
 - Procurement of anti-air missiles that contribute to air superiority as well as torpedoes needed to secure maritime superiority (¥27 billion)
 - Procurement of stand-off missile (¥14.9 billion)(repost)
 - Procurement of PAC-3MSEs (¥35.6billion)(repost)



Dispersion pads

- Development of dispersion pads (¥3 billion)
Development of dispersion pads that allow parked aircraft to be dispersed at air bases to enhance resiliency.
- Procurement of equipment necessary to improve capabilities to restore damaged runways (¥500 million)
Procure equipment which enables faster restoration of damaged runways of airbase.



Equipment to restore damage to runways

- Promotion of measures against aging and earthquake proofing of SDF facilities (¥48.3 billion)
Ensure the SDF's stable operational readiness by renovating SDF facilities such as office buildings and barracks, which fundamentally support operations of the SDF.

(2) Promoting Measures Regarding Sustainment and Maintenance of Equipment

- Ensure necessary expenses for sustainment and maintenance of equipment (¥1,128.2 billion)

Promotion of comprehensive contract including PBL* (Performance Based Logistics)

(* PBL) Conclude a comprehensive contract for a long period of time while focusing on outcomes such as shortening of repair time and securing stock as for maintenance of defense equipment, and the PBL does not require concluding contracts for necessary repairs and procuring parts each time they are needed.

- PBL contract for GSDF special transport helicopters (EC-225LP) (¥5.7 billion)
Expand the number of parts subject to the PBL contract for EC-225LP, which has been in place since FY2012.



*Special transport helicopter
(EC-225LP)*

- PBL contract for gas turbine units of MSDF destroyers (¥1.3 billion)



Hyuga-class destroyer

- PBL contract for parts of MSDF fixed-wing patrol aircraft (P-3C) (¥900 million)



*Fixed-wing patrol aircraft
(P-3C)*

- PBL contract for MSDF training helicopters (TH-135) (¥11.9 billion)
Expanding the number of parts subject to the PBL contract for the TH-135, which has been in place since FY 2016.



*Training helicopter
(TH-135)*

- Comprehensive contract for parts of ASDF fighters (¥6.2 billion)
 - Procure components of F-2 (wings)
 - Repair components of landing gear systems of F-15



Fighter (F-2)

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 a declining birth rate, the MOD/SDF will strive to secure diverse, high-quality talents from a wider range of people and also promote initiatives on a priority basis towards the establishment of an environment that enables all SDF personnel to maintain high morale and continue to fully exercise their abilities.

Moreover, to reinforce the technological base that has bearing on defense equipment by leveraging Japan's superb science and technology, as the 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 the 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 (¥240 million)
Promote recruitment advertisement targeted at potential applicants and their parents, by means of creating appealing recruitment videos that can be popular on social media and utilizing advertising banners.
- Holding web seminars (¥2 million)
Hold online recruiting sessions to have more students understand the attractiveness to work as a the SDF personnel, so that MOD can secure human resources in a stable manner even in the times of self quarantine due to novel coronavirus disease (COVID-19).
- Recruitment of female SDF personnel (¥2 million)



Recruitment advertising videos



Web seminar (conceptual image)

Enhancement of Re-employment Support Programs

- Financial support for higher education for the uniformed SDF personnel in fixed term system after completing tenure (¥10 million)
In order to maintain and increase the number of fixed-term, reserve, and ready reserve personnel, provide a certain amount of money for the uniformed SDF personnel in fixed term system who enters university in Japan after completing tenure, upon a condition that they serve as reserve or ready reserve personnel while in university.
- Establishment of new vocational training courses (¥3 million)
 - In order to expand re-employment opportunities for female SDF personnel, MOD established new courses that allow participants to obtain qualifications for registered sales clerk, financial planner, or dispensing pharmacy clerk.
 - As the raise in upper age limit for employment created more needs, to expand re-employment opportunities for those who already have certain qualifications, MOD established new courses that allow participants to obtain qualification for electrical work construction management engineer, fire fighting equipment inspector, or gas welding operations chief.
- Vocational training for female SDF personnel (¥10 million)



Vocational training (field draining)

Others

- Promotion of measures to prevent harassment (¥20 million)
 - Provide consultation services by lawyers
 - Group education on harassment prevention

2 Promotion of Further Participation of Female Personnel and Working Style Reform and Improvement of Living and Work Environment

Further promoting greater engagement of female personnel through expanding recruitment and appointment, while implementing and enhancing measures concerning the work-life balance and improvement of living and work environment.

Promotion of Further Participation of Female Personnel

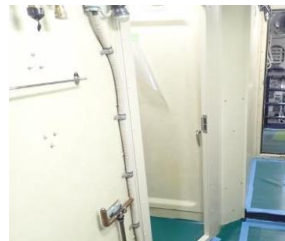
- Development of foundation of education/living/work environment for female SDF personnel (¥4.6 billion)
 - Improve secured sections for female personnel in barracks
 - Make renovations to improve living and work environment for female SDF personnel (renovations of lavatory and bathing facilities)
 - Improve education infrastructure for female SDF personnel
 - Improve sections for female personnel on ships (MSDF)



Image after the renovation
Improvement of section for female personnel
(barracks; installation of a door to separate section for female personnel)



Before the renovation (male lavatory)
After the renovation (Female lavatory)
Improvement of section for female personnel
(turning men's lavatory into women's)



Before the installation
After the installation
Improvement of section for female personnel
(submarines; installation of a passage door in front of the shower room)

- Mentor training, inviting external counselors for female SDF personnel, and securing consumable supplies for women in the event of a disaster, etc. (¥70 million)
- Reorganization of the Female SDF Personnel Training Unit
Improve the education system of the Female SDF Personnel Training Unit for the promotion of the activities of women in the GSDF.

Promotion of Female Personnel's Engagement in International Cooperation, etc.

- Dispatch personnel to NATO gender-related annual meeting
Dispatch female SDF personnel to the gender-related annual meeting and other occasion hosted by NATO for developing the system and human resources to bring the perspective of gender into PKO activity, etc.

* 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

Improvement of Work Environment for Working Style Reform

- Procurement of remote-work terminals to prevent the spread of infectious diseases such as COVID-19 and to ensure the continuity of operations in the event of the spread of such diseases (¥290 million).
- Improvement of the work environment by promoting a paperless office and space-saving operations to create a better workplace (¥40 million).

Support for Work-Life Balance

- Improvement of workplace nurseries (¥80 million)
Improve workplace nurseries corresponding to working patterns of SDF so that the child-rearing personnel can engage in their duties without concerns.

- Improvement of workplace nurseries (GSDF)
- Provision of supplies in workplace nurseries



Children playing in the garden of the workplace nursery

- Provision of supplies for temporary child-care service in case of emergency operations (¥20 million)
 - Provide supplies (safety mats, cribs, etc.) for temporary child-care service in case of emergency operations.
 - Implement temporary child-care service drills, assuming emergency operations.
 - Participate in courses designed to improve child-care skills for temporary child-care service in case of emergency operations.



Scene of temporary child-care service drill assuming emergency operations

Implementation of Education and Training for Raising Awareness

- Effort to eliminate conventional mindset about gender roles in the workplace and create a work environment that enables all personnel, including those under time constraint due to child-care or nursing care, to make full use of their ability (¥30 million).
 - Conduct seminars for raising awareness, etc.
 - Collective training for promoting gender equality, etc.
 - Production and distribution of pamphlets featuring roles played by female personnel and supporting for work-life balance, etc.



A scene of the collective training

Improvement of Living and Work Environment

- Construct and maintain SDF facilities and secure equipment and daily necessities to improve the living and work environment for SDF personnel, including those necessary for adapting to the “New Normal”, so that they can focus on their duties with high morale.
- Constructing and maintaining SDF facilities (¥50.1 billion)
- Procurement of fixtures, daily necessities, etc. (¥3.8 billion)
- Procurement of uniforms, etc. (¥7.7 billion)
- Development of foundation of education/living/work environment for female SDF personnel (¥4.6 billion)(repost)



(3) Enhancement of Educational and Research System *Provision of supplies*

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.

National Institute for Defense Studies

- Publication of “Security & Strategy”
 - Enhance the content of “Security & Strategy” (newly published in 2020 in Japanese), as a professional journal open to the public.
 - Contribute to academic research and dissemination of knowledge on national security.



National Defense Academy

- Maintenance and enhancement of research capability and education standard (¥70 million)
Develop the equipment necessary to conduct research in new areas from an academic point of view.

National Defense Medical College

- Maintenance and enhancement of research capability and education standard (¥40 million)
Develop the equipment necessary to conduct research in new areas from an academic point of view.

- Strengthen research function related to defense medicine
 - Conduct advanced research on defense medicine which contribute to the operation of SDF units and education by systematizing classification of research and evaluation criteria at the National Defense Medical College (¥400 million).
 - Develop educational and research equipment necessary to improve the ability to respond to infectious diseases (¥40 million).

(4) Promotion of Effort Related to SDF Reserve Personnel Who Support Sustainable Unit Operation

Promote efforts to increase the number of SDF Reserve Personnel as well as have SDF Ready Reserve and Reserve Personnel in action for a wider variety of opportunities.

- Development of a system to confirm response to a call-up (¥10 million)
Develop a response confirmation system utilizing external services to quickly and accurately confirm the call-up status of SDF Ready Reserve and Reserve Personnel in the event of a disaster.
- Procurement of uniforms, accoutrements , etc. (¥100 million)
In order to improve the effectiveness of SDF Reserve Personnel, implement procurement of uniforms, accoutrements, as well as containers and shelves to store them.
- Financial support for higher education for the SDF personnel in fixed term system after completing tenure (¥10 million)(repost)

(5) Enhancement of Medical Functions

In order to respond to various situations, the SDF will strive to enhance measures such as frontline first aid capabilities and the capacity to conduct Damage Control Surgery (DCS) at field medical facilities to stabilize the symptoms of patients and the capacity to manage patients being sent back as part of strengthening the system to seamlessly cover the entire stretch between the frontline and final medical evacuation facilities. Moreover, the 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. For improving the capability of battle injury treatment, the SDF will build up training and the educational foundation. It will also strengthen the necessary foundation for operations for the capability of international cooperation activities.

- Strengthen the posture of seamless medical care and evacuation from the frontline to the final medical evacuation destination.
 - Procure equipment required for DCS and post-surgery patient management (¥200 million).
 - Procure necessary equipment and supply for managing patients during medical evacuation (¥1 million).



*Field surgical system(for divisions and brigades)
(left: outside, right: inside)*

- Demonstration of emergency armoring of ambulances (¥300 million).
Conduct demonstration of emergency attachment of additional armor to quickly and easily provide protection to unarmored vehicles.



Emergency armoring of ambulance(image)

- Initiatives toward upgrading SDF hospitals to hubs with enhanced functions
 - **Construction of the new SDF Iruma Hospital (tentative name)(*1)**
 - Preparatory work associated with the reconstruction of the SDF Fukuoka Hospital (¥30 million)
 - Investigation work for the reconstruction of the SDF Yokosuka Hospital (*2) (¥10 million)
 - **Procurement of medical equipment in line with transfer of management of SDF Naha Hospital from the ASDF to the GSDF (*3) (¥200 million)**
- *1 The SDF Misawa Hospital and the SDF Gifu Hospital will be abolished (converted to medical offices) at the end of FY2021 with the establishment of the SDF Iruma Hospital (tentative name).
- *2 The SDF Ominato Hospital, the SDF Maizuru Hospital, and the SDF Sasebo Hospital will be abolished at the end of FY2021 (converted to medical offices) in line with the functional enhancement of the SDF Yokosuka Hospital.
- *3 The SDF Beppu Hospital will be abolished at the end of FY2021.



SDF Iruma Hospital (tentative name)
(conceptual image)

- Education and training for improving the capability to respond to battle injury, and development of the foundation for such educational training
 - Procure educational material for improving first-aid skill (¥60 million)
 - Develop personnel for DCS section (¥20 million)



Human-body simulator for improving first-aid skill in frontline



Improving skill of DCS (DCS section)

- Enhance capabilities in response to infectious diseases which can be an international threat
 - Procurement and maintenance of various equipment necessary to transfer patients with Ebola hemorrhagic fever (¥30 million)
 - Strengthen posture of prevention for severe infectious disease (¥200 million)
- **Measures to prevent the spread of COVID-19**
 - **Measures to prevent the spread of COVID-19 for units dispatched overseas (¥200 million)**



Transfer of patients



Equipment necessary for transfer of patients with infectious disease



COVID-19 antigen test kit

(6) Increase the Number of Defense Officials

Increase (net increase) of the number of defense officials at the MOD in order to improve the structure to execute what the NDPG and the MTDG stipulate and to respond to various situations including infectious disease, given the fact that the decision by the Prime Minister which directs personnel expenses and organization and quota of staff change request (Directive for organization and allocation of personnel expense in FY2021 to proceed with core issue of the Cabinet [July 21st, 2020]) includes development of security arrangement.

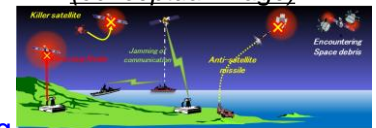
Strengthen Necessary Capability for Cross-Domain Operations and Advanced Technologies (133 personnel)

(Including: Strengthen Organizations Related to New Domains and Advanced Technologies (98 personnel)

- Increase the number of defense officials involved in strengthening of defense functions against cyber attacks on the SDF and enhancing the security standards for defense procurement to improve cyber security of the defense and other industries.
- Increase the number of defense officials for human resource development in conjunction with the expansion of the space sector in the SDF and for strengthening the team for acquiring equipment necessary for SSA systems, such as SSA satellites.
- Increase the number of defense officials to promote the early identification, protection, and development of innovative and emerging technologies that can have a significant impact on future security.



Defense official engaging in cyber security work (conceptual image)



Space affairs (conceptual image)



Nurses working in the medical field (conceptual image)



Defense officials engaged in a disaster relief operation (conceptual image)



Defense official in construction of defense facility (supervising) (conceptual image)

Strengthen Response Capability to Various Situations Including Infectious Disease (44 personnel)

- Increase the number of defense officials to strengthen the system for dealing with infectious diseases at the National Defense Medical College Hospital and the SDF hospitals.
- Increase the number of defense officials to plan and study infectious disease control plans and develop operational systems.
- Increase the number of defense officials to strengthen coordination with local governments and improve the readiness, resilience, and response capabilities of the SDF in response to various contingencies, including infectious diseases and disasters that are becoming more intense, frequent and diverse.

Improve Security Cooperation, Strengthen Japan-U.S. Alliance (59 personnel)

- Increase the number of defense officials to promote security cooperation based on the concept of "Free and Open Indo-Pacific" and to promote Japan-U.S. defense cooperation.
- Increase the number of defense officials to promote projects to reduce local burdens, such as relocation and maintenance related to the return of land south of Kadena Air Base, consolidation of U.S. military facilities in Kanagawa Prefecture, and new environmental issues.

Increase the Number of Defense Officials to Build Truly Effective Defense Capability (32 personnel)

- Increase the number of defense officials for building a viable defense force through strengthening the human resource base (by means such as the active recruitment of new personnel), the intelligence function, the industrial base, and cooperation with local communities.

Organizational quota for expanding opportunities for elder government Officials and promoting of work-life balance (22 personnel)

< Reference: Changes in the number of defense officials >

(Unit: person)

	JFY2016	JFY2017	JFY2018	JFY2019	JFY2020	JFY2021
	The 13th rationalization plan				The 14th plan	
Rationalization	△269	△269	△276	△273	△278	△287
Increase	169	182	209	204	299	290
Net Increase and decrease	△100	△87	△67	△69	21	3
Number at the end of FY	21,061	20,974	20,931	20,903	20,924	20,927

Note1: Doesn't include a special component of the organizational quota for promoting employment of persons with disabilities, etc.

2: JFY2021 rationalization etc. include transfer △8 to Digital Agency.

III

Priorities in Strengthening Core Elements of Defense Capability

2 Reinforcing the Technology Base, etc.

(1) Reinforcing the Technology Base

To secure technical superiority in the field of strategically important equipment and technology, make concentrated investment for core technology such as technology in new domains and cutting-edge, game-changing technology such as artificial intelligence (AI).

Programs for F-X

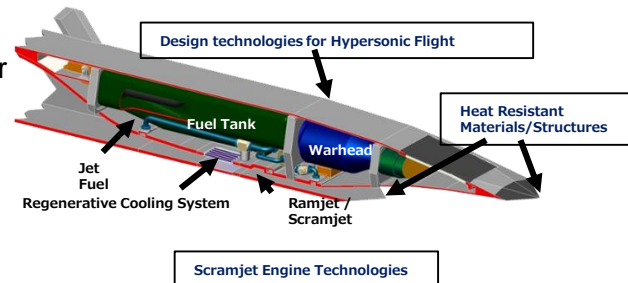
- Development of F-X (¥57.6 billion)(repost)
- Research related to F-X
 - Research on the integration of the mission system of a fighter aircraft (¥4.9 billion)(repost)
 - Research on technologies used for remotely-operated support aircraft (¥1.5 billion)(repost)
 - Research on advanced radar technology (¥4.1 billion)(repost)

Programs in Electromagnetic Domain

- Development of stand-off electronic warfare aircraft (¥10 billion)(repost)
- Demonstrate vehicle-mounted laser system (¥2.8 billion)(repost)
- Research on HPM generator (¥0.5 billion)(repost)
- Research on multi-GNSS receiver (¥400 million)(repost)

Programs for Stand-off Defense Capability

- Research on HVGP (Hyper Velocity Gliding Projectile) for defense of remote islands (¥15 billion)(repost)
- Research on hypersonic missile (¥9 billion)
Continue research on the component technologies for the scramjet engine (*1), which can cruise at hypersonic speeds (*2), with the aim of putting it into use as soon as possible.
 - *1 Scramjet engine: An engine that uses combustion in a supersonic airflow
 - *2 Hypersonic speed: Speed range of five times or more than the speed of sound
- Development of upgraded Type-12 Surface-to-ship guided missile (¥33.5 billion)(repost)



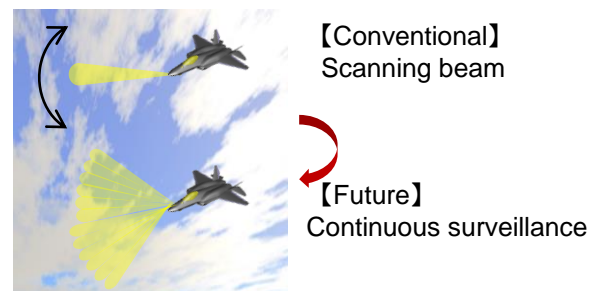
*Research on hypersonic missile
(conceptual image)*

Programs for Cyber Defense

- Study on technologies for responding to cyber attacks targeting intelligence processing systems within equipment (¥0.9 billion)(repost)

Programs for Wide-Area Persistent Surveillance

- Research on advanced radar technology (¥4.1 billion)(repost)
- Research on infrared sensor with high sensitivity and broad detection range (¥1.2 billion)(repost)



*Research on advanced radar technology
(conceptual image)*

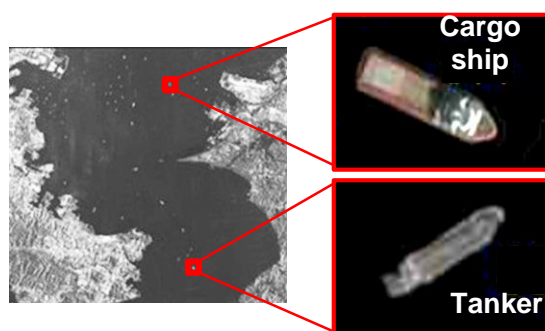
Programs for Underwater Defense

- Continue test and evaluation of unmanned underwater vehicles (UUVs) and **initiate research on technology to prevent unauthorized analysis with software** (¥600 million).
- Establish “Iwakuni Marine Environment Test/ Evaluation Satellite (tentative name)” in the Naval Systems Research Center to promote efficient and effective research on UUVs.

Promotion of Rapid Prototyping of Evolving Cutting-Edge Civilian Technologies

- Discovering and fostering innovative and emerging technologies (¥10.7 billion)
 - Promote the “Innovative Science & Technology Initiative for Security” program regarding basic research at universities, etc. on innovative and emerging technologies.
 - Conduct “Bridging Research” for leading innovative and emerging technologies in basic research into defense applications.

- Programs for rapid practical application of new technologies(¥0.8 billion)
Achieve rapid practical application (in approx. three to five years) of advanced commercial technologies that has a fast innovation cycle, such as artificial intelligence (AI) technology while keeping operational needs in mind.



*Example of programs for rapid practical application of new technologies
(Application of AI for the construction of a satellite image database)*

Improvement in Efficiency of Research and Development (Using Test Submarines)

- Improvement in efficiency of test and evaluation by means such as carrying out measurements in the real environment at an early stage by installing a prototype on a test submarine (converted from an existing submarine)
 - Develop sonar system for future submarines (¥3.5 billion)(repost)
 - Research on a noise-reducing torpedo-launcher(¥1.8 billion)(repost)

Enhancement of the Research System for Advanced Technologies

- Establish “Future Capabilities Development Center(tentative name)” in ATLA by integrating Electronic Systems Research Center and Advanced Defense Technology Center for increasing necessity on prioritization of research projects to catch up with technological advances.

Strengthening of Research, Analysis, and Collaboration on Advanced Technologies

- Establish “Technology Collaboration Support Division (tentative name)” in Department of Technology Strategy (DTS), and “Director for Advanced Technology Strategy (tentative name)” in Technology Strategy Division under DTS of ATLA, to enhance capabilities to survey and analyze international and domestic trends of advanced technologies and to enhance collaboration for incorporating advanced technologies into defense applications.

(2) Promoting Optimized Acquisition

Improve effectiveness and flexibility of project management through lifecycle to further promote effective and efficient procurement of equipment, and promote the effort to rationalize FMS procurement given that the importance of managing price and delivery date in FMS is increasing.

Improvement in Effectiveness and Flexibility of Project Management through Lifecycle of Equipment

- Establish the “Outer Space Project Management Section (tentative name)” “under the Project Management Division (Communications and Electronic Systems, Ordnance and Vehicles), and changing the division name to “Project Management Division (Outer Space and Land Equipment (tentative name)” of the ATLA for the management of space-related projects (repost).

Rationalization of FMS Procurement

- Strengthening the implementation management system of FMS procurement
Establish “Implementation Management/Promotion Section (tentative name)” within the FMS Office, Import Division to strengthen the implementation management system for appropriate FMS procurement.

Streamlining Sustainment of Equipment

- Promotion of PBL (Performance Based Logistics)
Realize timely supply/repair of parts through PBL contracts, in which contract procedures are no longer required for every procurement, and estimating demands and controlling inventory are left at the discretion of suppliers, while also taking advantage of global supply chains as an option.
- Repair of GSDF special transport helicopters (EC-225LP) (¥5.7 billion)(repost)
- Repair of gas turbine units of MSDF destroyers (¥1.3 billion)(repost)
- Repair of parts of MSDF fixed-wing patrol aircraft (P-3C) (¥900 million)(repost)
- Repair of MSDF training helicopters (TH-135) (¥11.9 billion)(repost)



Special transport helicopter
(EC-225LP)



Hyuga-class destroyer



Fixed-wing patrol aircraft
(P-3C)



Training helicopter
(TH-135)

(3) Strengthening the Defense Industrial Base

In order to strengthen the resilience of Japan's defense industrial base, which is an essential foundation for production, operation and maintenance of equipment, the government will actively take measures to strengthen the supply chain. Also, the government as a whole will promote appropriate overseas transfer of defense equipment under the Three Principles on Transfer of Defense Equipment and Technology, which permits transfer of defense equipment in cases such as when the transfer contributes to Japan's security. In addition, the ATLA will enhance the information security measures that are necessary for information security in Japan's defense industry.

Strengthening the Supply Chain

- Support for companies to maintain and strengthen defense industrial base
Conduct initiatives to support companies' smooth business succession in the case of their withdrawal from defense business (¥80 million).
- Discover and utilize innovative technology and technology of SMEs
 - Organize exhibitions for matching with the MOD/SDF, U.S. Forces in Japan and Japanese and U.S. defense industry (¥20 million).
 - Study the possibility of AI technologies to be applied to production processes of defense equipment (¥30 million).

Promotion of Participation in the Maintenance of Imported Equipment

- Expand the common maintenance base for Ospreys of Japan and the U.S
Construct new hangars for the Planned Maintenance Interval (PMI) for Ospreys of Japan and the U.S at GSDF Camp Kisarazu (¥6.6 billion)



Osprey(V-22)

Promote Appropriate Overseas Transfer of Defense Equipment

- Efforts related to defense equipment and technology cooperation to promote overseas transfer of defense equipment
 - Conduct Feasibility Studies to grasp the potential needs of target countries and to carry out activities for proposals with the private sector (¥200 million).
 - Conduct studies to promote the overseas transfer of aircraft developed by the MOD based on the characteristics of each model (¥80 million).
 - Participation in international defense equipment exhibitions to display defense equipment developed in Japan and superior technology possessed by SMEs (¥300 million).
- Promote cooperation and information sharing between the public and private sectors.
 - Create a Portal-Site as a platform for sharing information in order to promote public-private collaboration for overseas transfer. At the same time, produce a promotional video and other materials for overseas transfer to strengthen information dissemination (¥20 million).

Reinforcement of Measures on Information Security

- Establish the "Industrial Cybersecurity Office (tentative name)" in the Equipment Security Management Division of the ATLA in order to promote various information security measures for the defense industry (repost).

3 Enhancing Intelligence Capabilities

In order to be able to provide timely and effective intelligence support to policy decision and SDF operations, the MOD/SDF will enhance intelligence capabilities at all stages, including intelligence collection and analysis.

- Enhancement of the Defense Attaché system
Newly dispatch one defense attaché to New Zealand and Spain respectively, and dispatch one additional attaché in Israel.
- Establish Senior Coordinator for Intelligence on Economic Security (tentative title) in the Defense Intelligence Division, Bureau of Defense Policy
Establish a position responsible for both collecting/analyzing and securing information on advanced technologies (ex. quantum science and technology, lasers, 3D printers, and AI) since other countries are competing to acquire such advanced technologies, which has a significant impact on the security environment.
- Reinforcement of intelligence collection and analysis capability
Establish necessary arrangements at the Defense Intelligence Headquarters, etc. to enhance capabilities of intelligence collection and analysis of international military situations, etc.
- Procurement of data for image analysis (repost)
Collect information in the region surrounding Japan using various commercial satellites, including optical satellites with high resolution and a small satellite constellation constellations which allow frequent imaging.

IV Response to Large-Scale Disasters

In the event of natural disasters, the SDF will respond 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 disasters (¥10 billion)



*Seismic retrofitting of barracks
(conceptual image)*

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

- SDF Joint Exercise for Rescue (JXR)
Implement the SDF Joint Exercise for Rescue to maintain and enhance 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.
- 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.
- Remote Island Disaster Relief Exercise (RIDEX)
Implement drills to maintain and enhance capabilities to ensure smooth joint disaster response operations in response to sudden large-scale disasters on remote islands.



JXR



TREX



RIDEX

3 Procurement of Equipment Contributing to Disaster Response

- Type-07 mobility support bridge (1 set: ¥1.2 billion)
Procure a Type-07 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 on
passage of fire engines)

- Type-18 personal protective equipment (1,092 sets: ¥270 million)
Procure Type-18 personal protective equipment to protect SDF personnel from toxic substances such as chemical agents.



Type-18 personal protective equipment

- Decontamination set (decontamination vehicle)
(1 vehicle: ¥100 million)
Procure a decontamination set (decontamination vehicle) to decontaminate areas and facilities contaminated by chemical agents.



Decontamination set (decontamination vehicle)

- Water purification kit (1 set: ¥100 million)
Procure water purification kits to ensure a stable supply of drinking water in the event of a disaster, etc.



Water purification kit

- Procurement of rescue helicopters (UH-60J)(5 helicopters: ¥26.1 billion)(repost)
- Procurement of transport aircraft (C-2) (1 aircraft: ¥22.5 billion)(repost)
- Procurement of new utility helicopters (UH-2) (7 helicopters: ¥12.5 billion)(repost)

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

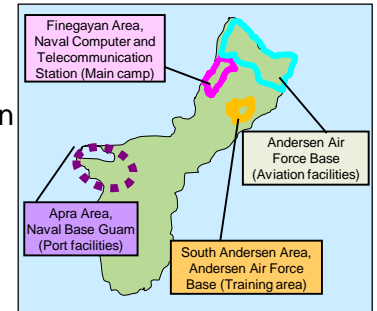
While maintaining the deterrence of the U.S. Forces, Japan will steadily implement specific measures, including the realignment of the U.S. Forces in Japan, to mitigate the impact on local communities such as those in Okinawa.

1 U.S. Forces Realignment-Related Expenses [Measures for Mitigating the Impact on Local Communities]

¥293 billion

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 (¥44.1 billion)
Construction of bachelor officers quarters and other facilities in Finegayan area



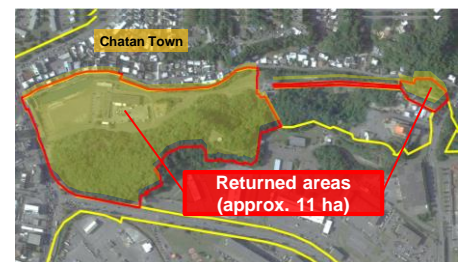
Guam

Realignment-Related Measures in Japan

- Project for realignment in Okinawa (¥190.5 billion)
 - Relocate MCAS Futenma (¥84.6 billion)
 - Return land areas south of Kadena Air Base (¥106 billion)
- Project for the relocation of the carrier-based aircraft (¥0.7 billion)
- Project for contingency use (¥2.5 billion)
- Project for training relocation (¥9.2 billion)
- Project for smooth implementation of realignment-related measures (¥46.1 billion)



MCAS Futenma



Return of portions of the Facilities and Engineering Compound in Camp Zukeran (March 31, 2020)

2 SACO-Related Expenses

¥11.7 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 except for changes made under the Japan-U.S. Security Consultative Committee ("2+2") Joint Statement.

3 Promotion of Measures for Bases, etc.

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 ensure smooth and effective stationing of the U.S. Forces in Japan.

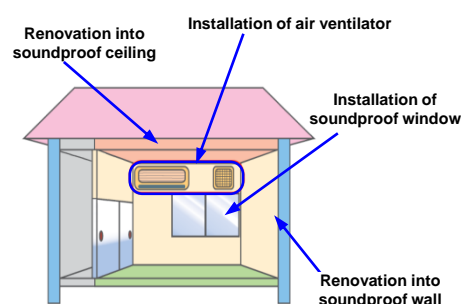
(1) Expenses Related to Measures for Communities around Bases

¥116.3 billion

Including: Residential sound proofing: ¥51.3 billion
Environment improvement in the neighboring communities : ¥65 billion

- Expenses for the prevention of disturbances resulting from SDF activities or the establishment and operations of defense facilities
 - Implement sound proofing projects for residences around air bases, etc.
 - Implement projects to improve the living environment of the neighboring communities (river and road restoration, sound proofing for schools, development of sand control dams and public welfare facilities, etc.)
 - Implement projects covered by Specified Defense Facilities Environs Improvement Adjustment Grants, which are strongly requested from municipalities around bases (development of public facilities and implementation of so-called soft projects such as medical cost subsidy)

[Example of residential sound proofing]



Sand control dam

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

¥201.7 billion

Including: Special Measures Agreement*: ¥153.8 billion
Facilities Improvement Program: ¥21.7 billion
Measures for USFJ employees: ¥26.1 billion

- Expenses of cost sharing based on the Special Measures Agreement and other measures to ensure the smooth and effective stationing of the U.S. Forces in Japan
 - Sharing of labor costs of USFJ local employees and costs of utilities used at USFJ facilities
 - Facilities Improvement Program (barracks, family housing, etc.)
 - Payment of employer contributions for USFJ local employees' social insurance premiums such as healthcare insurance and pension insurance



Barracks

*As the new Special Measures Agreement on the costs of stationing U.S. Forces in Japan is currently under negotiation, the estimated amount is allocated based on the current agreement.

(3) Rents for Facilities, Compensation, etc.

¥149.7 billion

- Rents for land areas of defense facilities and compensation for losses 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 bilateral/multilateral exercises, defense equipment and technology cooperation, capacity building and interchanges among military branches to strategically promote multi-faceted and multi-layered security cooperation, based on the vision of “Free and Open Indo-Pacific.”

1 Contribution to Stabilization of the Indo-Pacific Region

Promotion of Capacity Building

- Promotion of initiatives emphasizing capacity building for the ASEAN as a whole
Implement capacity building concerning humanitarian assistance/disaster relief (HA/DR), maritime security and [cybersecurity](#), while also promoting sharing of the recognition of international norms.
- Promotion of capacity building in the Indo-Pacific region
 - Implement programs to improve capabilities and training of military personnel in Southeast, South Asia and Pacific island countries in fields such as HA/DR and PKO.
 - Capacity building in collaboration with the U.S. and Australia.



Japan-ASEAN Invitation Program on HA/DR



Field training on HA/DR

Promotion of Defense Cooperation and Exchanges

- Initiatives under the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus)
Proactively promote the enhancement of defense and security cooperation in the Indo-Pacific region through the ADMM Plus, which is the only official defense ministerial meeting in the region, by serving as Co-Chair of the Experts' Working Group on Peacekeeping Operations (2021-2023).
- Initiatives under the Vientiane Vision 2.0
Based on the Vientiane Vision 2.0, an updated guideline for future Japan-ASEAN defense cooperation, promote practical defense cooperation, which puts emphasis on ensuring the rule of law and strengthening maritime security in order to ensure the centrality, unity and resilience of ASEAN.
- Participation in Pacific Partnership 2021
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 peace cooperation activities through cooperation with governments, militaries and other organizations.



ADMM-Plus



Japan-ASEAN Ship Rider Cooperation Program



Pacific Partnership

- Indo-Pacific Deployment (IPD) 2021
Improve tactical skills of the MSDF and promote cooperation with navies of other countries, as well as contribute to regional peace and stability and enhance mutual understanding and confidence-building through bilateral/multilateral exercise with navies from the Indo-Pacific region.



IPD

- Multilateral HA/DR Exercise in Micronesia
Enhance HA/DR capabilities through drills in which participating countries' aircraft drop donated goods into the waters of the Federated States of Micronesia.



Multilateral HA/DR Exercise in Micronesia

- Field Exercise with Indian Army in India
Improve tactical skills by conducting bilateral exercise with the Indian Army, which has actual combat experience in the field of counter-terrorism.



Field exercise with Indian Army in India

2 Appropriate Response to Improve Global Security Challenges

International Cooperation with UN and Partners in the Areas of Strength

- Dispatch of instructors to PKO Training Centers in African and other countries
Dispatch SDF personnel as instructors to provide education for UN peacekeeper candidates, mainly in African countries, based on their request to improve their peacekeeping capabilities to maintain peace and stability of the region.



The instructor handing over the curricula

- Disaster Response Capacity Building for the Djibouti Armed Forces
Promote mutual understanding and confidence building with the Republic of Djibouti in strengthening the relationship between defense authorities of two countries and contribute to the development and peace of Africa by providing trainings to build disaster response capabilities of the Djibouti Armed Forces upon a request from the Djibouti government.



Instruction concerning the operation of engineering equipment for the Djibouti Armed Forces

- UN Triangular Partnership Project (UNTPP)
Contribute to the deployment of UN peacekeeping missions by dispatching SDF personnel to UN peacekeeper candidates from African countries, Asian and surrounding regions, in the areas of engineering and medications.



UNTPP

Ensuring Maritime Security

- Counter-piracy operations off the coast of Somalia and in the Gulf of Aden
 - Continue counter-piracy operations by a destroyer and P-3Cs off the coast of Somalia and in the Gulf of Aden
 - Carry out operations in Combined Task Force 151 (CTF151), a multinational counter-piracy task force
 - Conduct air transportation using KC-767 and other aircraft as necessary



Destroyer escorting vessels

Efforts to Ensure the Safety of Japan-Related Vessels

- Information gathering activities in the Middle East
 - Conduct information gathering activities by a destroyer and P-3Cs in three waters of high seas: the Gulf of Oman, the northern Arabian Sea and the Gulf of Aden to the east of the Bab el-Mandeb Strait
 - Conduct activities as Japan's own efforts
 - The information is shared with relevant ministries and agencies, as well as with relevant industries and is used for the government's navigation safety measures when necessary.



Destroyer conducting information gathering activities

Enhancement of Capability to Conduct Overseas Activities

- Participate in multilateral training/exercises
 - Cobra Gold
Participate in the multilateral exercise Cobra Gold to maintain and improve the SDF's joint operation capabilities for rescue of Japanese nationals overseas and to increase and enhance cooperation and mutual understanding among participating countries.
 - Khaan Quest
Participate in the multilateral exercise Khaan Quest to maintain and improve various capabilities for UN PKO and to increase and enhance mutual understanding and relations of trust among participating countries.



Cobra Gold

Strengthening defense corporation with partner countries

- Field Exercise with British Army
 - Vigilant Isles
Improve tactical skills as well as strengthen relationship between British army by conducting practical exercise.

VII Streamlining Initiatives

- Organization and Equipment Optimization Project -

Based on the NDPG and the MTDP which were approved in Dec. 2018, various initiatives to further streamline and rationalize defense force development have been promoted, resulting in reduced costs of approximately ¥416.8 billion.

1 Optimization of Organizational Quotas

Review human resource allocation in all MOD/SDF branches by abolishing existing units and promoting outsourcing, and reallocate staff to the new domains of space, cyberspace and electromagnetic spectrum.

2 Project Review [Expected Reduction: ¥206.8 billion]

Pursue cost reduction by suspending the use of equipment with lowered importance, reviewing/discontinuing projects of low cost-effectiveness, and streamlining maintenance methods.

(Example)

- Suspension of the use of 20 mm anti-aircraft guns (expected reduction: ¥3.9 billion)
- Diversion and utilization of sample autonomous underwater vehicles for mine counter measure (expected reduction: ¥900 million)
- Cost reduction of special parachute systems (expected reduction: ¥400 million)

3 Standardization and Optimization of the Specification [Expected Reduction: ¥28.8 billion]

Review equipment structure through modularization, standardization, use of civilian goods and review of equipment specifications, to shorten development and acquisition timelines and reduce the life cycle cost

- Cost reduction in development of sonar system for future submarines by utilizing existing equipment (expected reduction: ¥2 billion)

4 Bulk and Joint Procurement [Expected Reduction: ¥38.1 billion]

Pursue cost reduction by bulk purchase of equipment

(Example)

- Bulk purchase of 5 rescue helicopters (UH-60J) (expected reduction: ¥10.2 billion)

5 Procurement of Equipment and Services Using Long-Term Contracts

[Expected Reduction: ¥10.4 billion]

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

- Bulk purchase of components of fighters (F-2) (10-year contract) (expected reduction: ¥4.7 billion)
- PBL contract for training helicopters (TH-135) (6-year contract) (expected reduction: ¥3.2 billion)
- PBL contract for special transport helicopters (EC-225LP) (6-year contract) (expected reduction: ¥2.4 billion)

6 Cost Scrutiny, etc. [Expected Reduction: ¥132.7 billion]

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

7 Study on Securing Income

Secure income through measures such as gaining income from the use of government property, sale of useless goods, opening to the public the remains of the Imperial Headquarters bunker in the Ichigaya area, and charging for the Air Base Festivals and part of the GSDF Fuji Fire Power Exercise.

VIII Others

1 Restructuring and Organizational Quota Changes

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

- Request for increase in the number of SDF personnel
 - Improve the readiness to quickly respond to various situations by increasing the number of SDF personnel to develop and reinforce the defense posture in the southwestern region as well as in its surrounding sea and airspace, while also improving the defense posture in new domains.
 - In order to further improve posture in new domains, transfer personnel from the GSDF to the Joint Staff (JS) to make the best out of limited human resources.

Categories	GSDF	MSDF	ASDF	JS, etc.	Total
Improve sufficiency rate	+232	+265	+213	0	+710
Transfer	△100	△17	△25	+142	
Total	+132	+248	+188	+142	

Note: "JS, etc." include JS, joint task units, Defense Intelligence Headquarters, Internal Bureau, and the Acquisition, Technology and Logistics Agency (ATLA).

< Reference: Changes in the requested number of SDF personnel (past 5 years) >

	FY2016	FY2017	FY2018	FY2019	FY2020
Number of requested personnel	+196	+310	+700	+664	+641

- Organizational quota changes

- Reorganize the Bureau of Local Cooperation to the Bureau of Policies for Regional Society and Environment (tentative name) by conducting integration of division within internal bureau which deal with environmental issue, reform divisions within the Bureau of Local Cooperation etc. in order to strengthen cooperation with local communities, and to strengthen partnership with U.S. Forces in Japan and enhance measures to address environmental issues in order to cope with the increasing number of projects and amount of work for harmonizing defense facilities with the surrounding areas, as well as to respond to the needs for improving the quality of work.
- Establish "Future Capabilities Development Center (tentative name)" in ATLA by integrating Electronic Systems Research Center and Advanced Defense Technology Center for increasing necessity on prioritization of research projects to catch up with technological advances. Also, to enhance capabilities to survey and analyze international and domestic trends of advanced technologies and to enhance collaboration for incorporating advanced technologies into defense applications, establish "Technology Collaboration Support Division (tentative name)" in Department of Technology Strategy (DTS), and "Director for Advanced Technology Strategy (tentative name)" in Technology Strategy Division under DTS of ATLA.(repost)



Ceremony for the Return of the Makiminato Service Area (Along National Route 58) and the Handover of the West Futenma Housing Area

2 Tax Reform Request

- Extension of Tax Exemption Measures for Diesel Oil [Diesel Oil Delivery Tax]
 - (i) Extension of tax exemption measures for diesel oil as power source for SDF's vessels and communication equipment, etc.

Extension of tax exemption measures for diesel oil in relation to the procurement of diesel oil used for SDF vessels and communication equipment etc.



*Operation of vessels
(conceptual image)*



*Operation of communication equipment, etc.
(conceptual image)*



- (ii) Extension of tax exemption measures for the case of provision of tax-exempt diesel oil based on the Law Concerning Measures to Ensure the Peace and Security of Japan in Situations that Will Have an Important Influence on Japan's Peace and Security, etc.

- (iii) Extension of tax exemption measures for the case of provision of tax-exempt diesel oil based on the Acquisition and Cross-Servicing Agreement (ACSA).

The special measures for exemption of diesel oil delivery tax on the provision of tax-exempt diesel oil to the third party (ex. the U.S. forces) for the logistics supports based on the Important Influence Situation Act, etc. and the provision based on ACSA in joint trainings with Australia Defence Force, etc. are applied to MOD. The extension of such special measures will be applied.



Providing diesel oil to a foreign military vessel at sea (conceptual image)

- Expansion of the Special Deductions of Corporation tax, etc. When Conducting Experimental Research [Corporation Tax, etc.]
(Joint request : Ministry of Economy Trade and Industry(METI), Cabinet Office (CAO), Ministry of Internal Affairs and Communications(MIC), Ministry of Education, Culture, Sports, Science and Technology(MEXT), Ministry of Agriculture, Forestry and Fisheries(MAFF), Ministry of Health, Labour and Welfare(MHLW), Ministry of Land, Infrastructure, Transport and Tourism(MLIT), Ministry of Environment(MOE))

The ceiling of deduction for corporation tax, etc. will be raised to further strengthen incentives aimed toward investment in research and development.

Major Equipment, etc.

1 Major Equipment

Categories				Number procured in FY2020	FY2021	
					Number procured	Amount (¥100 million)
Aircraft	GSDF	New utility helicopter (UH-2)		—	7	125
		Transport helicopter (CH-47JA)		3	—	—
	MSDF	Fixed-wing patrol aircraft (P-1)		3	3	666 (39)
		Search and rescue amphibian (US-2)		—	1	71 (17)
		Life extension of fixed-wing patrol aircraft (P-3C)		(7)	(4)	15
		Patrol helicopter (SH-60K)		7	—	—
		Life extension of patrol helicopters (SH-60K)		(3)	(3)	71
		Life extension of patrol helicopters (SH-60J)		(2)	—	—
		Life extension of imagery intelligence gathering aircraft (OP-3C)		(1)	—	—
		Life extension of signal reconnaissance aircraft (EP-3)		—	—	—
		ASDF	Fighter (F-35A)		3	4
	Fighter (F-35B)		6	2	259	
	Improvement of capability of fighters (F-2)		(2)	—	(30)	
	Transport aircraft (C-2)		—	1	225 (43)	
	Aerial refueling and transport aircraft (KC-46A)		4	—	55	
	Rescue helicopter (UH-60J)		3	5	261 (38)	
	Radiowave information gathering aircraft (RC-2) (mounted equipment)		—	—	69 (37)	
	Destroyer		2	2	944 (3)	
Vessel	MSDF	Submarine		1	1	684 (1)
		Mine sweeping vessel		1	—	—
		Life extension of Asagiri-class destroyers	Work	(3)	(—)	—
			Parts	(1)	(—)	
		Life extension of Abukuma-class destroyers	Work	(3)	(2)	1
			Parts	(—)	(—)	
		Life extension of Kongo-class destroyers	Work	(1)	(1)	65
			Parts	(2)	(2)	
		Life extension of Murasame-class destroyers	Work	(—)	(1)	58
			Parts	(2)	(2)	
		Life extension of Oyashio-class submarines	Work	(3)	(8)	62
			Parts	(5)	(4)	
		Life extension of Soryu-class submarines	Work	(—)	(1)	2
			Parts	(2)	(—)	
		Life extension of Hibiki-class ocean surveillance ships	Work	(1)	(1)	5
			Parts	(1)	(—)	
		Life extension of Towada-class fast combat support ships	Work	(1)	(—)	—
			Parts	(—)	(—)	
		Life extension of Asuka-class test ships	Work	(—)	(—)	25
			Parts	(—)	(1)	
		Life extension of Osumi-class landing ships	Work	(—)	(—)	33
			Parts	(—)	(1)	

Categories				Number procured in FY2020	FY2021	
					Number procured	Amount (¥100 million)
Vessel	MSDF	Improvement of capability of Asahi-class destroyers	Work	(－)	(－)	14
			Parts	(1)	(2)	
		Improvement of capability of short range surface-to-air missiles (SAM) of Takanami-class destroyers	Work	(－)	(1)	1
			Parts	(－)	(－)	
		Modernization of anti-submarine system of Takanami-class destroyers	Work	(－)	(－)	7 (14)
			Parts	(－)	(1)	
		Update of computers in combat systems equipped with vessels	Work	(－)	(7)	88
			Parts	(8)	(5)	
		Modernization of combat systems of Asagiri-class destroyers	Work	(3)	(－)	－
			Parts	(－)	(－)	
		Modernization of combat systems of Takanami-class destroyers	Work	(－)	(－)	－
			Parts	(2)	(－)	
		Modernization of CIWSs (high-performance 20 mm autocannon) of destroyers	Work	(1)	(5)	2
			Parts	(－)	(4)	
		Upgrade of Chihaya-class submarine rescue ships	Work	(1)	(－)	－
			Parts	(－)	(－)	
		Modernization of combat systems of submarines	Work	(－)	(1)	22 (2)
			Parts	(－)	(1)	
		Improvement of capability of computers in Fire Control System (FCS) 3A	Work	(－)	(2)	10
			Parts	(－)	(1)	
		Improvement in capability of Osumi-class LST	Work	(－)	(1)	3
			Parts	(1)	(－)	
Guided missile	GSDF	Type-03 middle-range surface-to-air missile (modified)		1 company	1 company	120
		Type-12 surface-to-ship missile		－	1 company	55
Firearm, vehicle, etc.	GSDF	Type-20 5.56 mm rifle		3,283	3,342	9
		9 mm pistol SFP9		323	297	0.2
		Anti-personnel sniper rifle (B)		8	－	－
		60 mm mortar (B)		6	6	0.2
		120 mm mortar RT		6	11	5
		Type-19 155 mm self-propelled howitzer		7	7	45
		Type-10 tank		12	－	－
		Type-16 mobile combat vehicle		33	22	158
		Vehicle, communications equipment, facility equipment, etc.		¥49.3 billion	－	318
BMD	MSDF	Improvement of capability of Aegis-equipped destroyers		2 vessels	2 vessels	2
	ASDF	Upgrade of Patriot system		8	－	－

Note 1: The procurement amount for FY2020 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 FY2021. (The period for acquiring the item varies by equipment, but can take between two to five years.)

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

Note 5: Regarding the volume of procurement for MSDF vessels, the upper figure represents the number of vessels subject to modification work, and the lower figure represents the number of parts necessary for modification work.

Note 6: The number of procurements in FY2019 for improvement of 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.

Note 7: Price of GSDF guided missiles indicates the amounts excluding procurement cost for ammunition.

2 Major Research and Development Programs

Item	Overview	FY2021 amount (¥100 million)
Study technology for responding to cyber attacks targeting intelligence processing system within equipment	Conduct research on cyber resilience technology for equipment to ensure continuous operation by information processing systems of the MOD/SDF's equipment even under cyber attacks.	9
Demonstrate vehicle-mounted laser system	Demonstrate vehicle-mounted laser system, which are assumed to respond efficiently to the future airborne threat by utilizing the result of research on high-power laser system.	2 8
Research on information gathering system for the next generation electronic information gathering aircraft	Conduct research to improve the signal detection, direction finding, and identification capabilities of the information-gathering system for aircraft systems towards development of a successor (next-generation electronic information-gathering system) to the EP-3, which is expected to be decommissioned in the future.	2 7
Research on advanced radar technology	Establish future high performance radar technology for use in airborne applications, which can operate over a wide frequency range and simultaneously provide wide angular coverage, through UK-Japan joint research.	4 1
Development of sonar system for future submarines	Develop sonar system with improved detection capability to ensure and maintain the advantage of the SDF submarines in the underwater domain for the future.	3 5
Research on a noise-reducing torpedo-launcher	Research on reducing sound of torpedo-launcher to make submarines even quieter.	1 8
Research on high-speed, high-maneuvering radar technology	Promote simulational research for the improvement of radar detection and tracking, and extension of the detection range of high-speed, high-maneuvering targets, such as low RCS* targets and hypersonic missiles. * RCS: Radar Cross Section	6
Development of upgraded Type12 surface-to-ship guided missile	Extend the shooting range of upgraded Type-12 surface-to-ship guided missile (modified), which are currently under development, and develop them as a stand-off missile that can be operated from various platforms.	3 3 5

3 Changes in the Number of SDF Personnel

● Changes in the number of SDF personnel

(Unit : person)

	End of FY2020	End of FY2021	Change
GSDP	158, 676	158, 571	△105
Regular personnel	150, 695	150, 590	△105
Ready reserve personnel	7, 981	7, 981	0
MSDF	45, 329	45, 307	△22
ASDF	46, 943	46, 928	△15
Joint units	1, 418	1, 552	134
JS	382	385	3
Defense Intelligence Headquarters	1, 932	1, 936	4
Internal Bureau	49	50	1
ATLA	406	406	0
Total	247, 154	247, 154	0
	(255, 135)	(255, 135)	(0)

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)

	GSDP	MSDF	ASDF
Annual average	140, 646	43, 033	44, 152

● Number of SFD reserve personnel

(Unit: person)

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

● Number of candidates for reserve personnel

(Unit: person)

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

● Changes in the number of defense officials

(Unit : person)

	JFY2016	JFY2017	JFY2018	JFY2019	JFY2020	JFY2021
	The 13th rationalization plan				The 14th plan	
Rationalization	△269	△269	△276	△273	△278	△287
Increase	169	182	209	204	299	290
Net Increase and decrease	△100	△87	△67	△69	21	3
Number at the end of FY	21, 061	20, 974	20, 931	20, 903	20, 924	20, 927

Note 1: The period of the 14th rationalization plan is from JFY2020 to JFY2024.

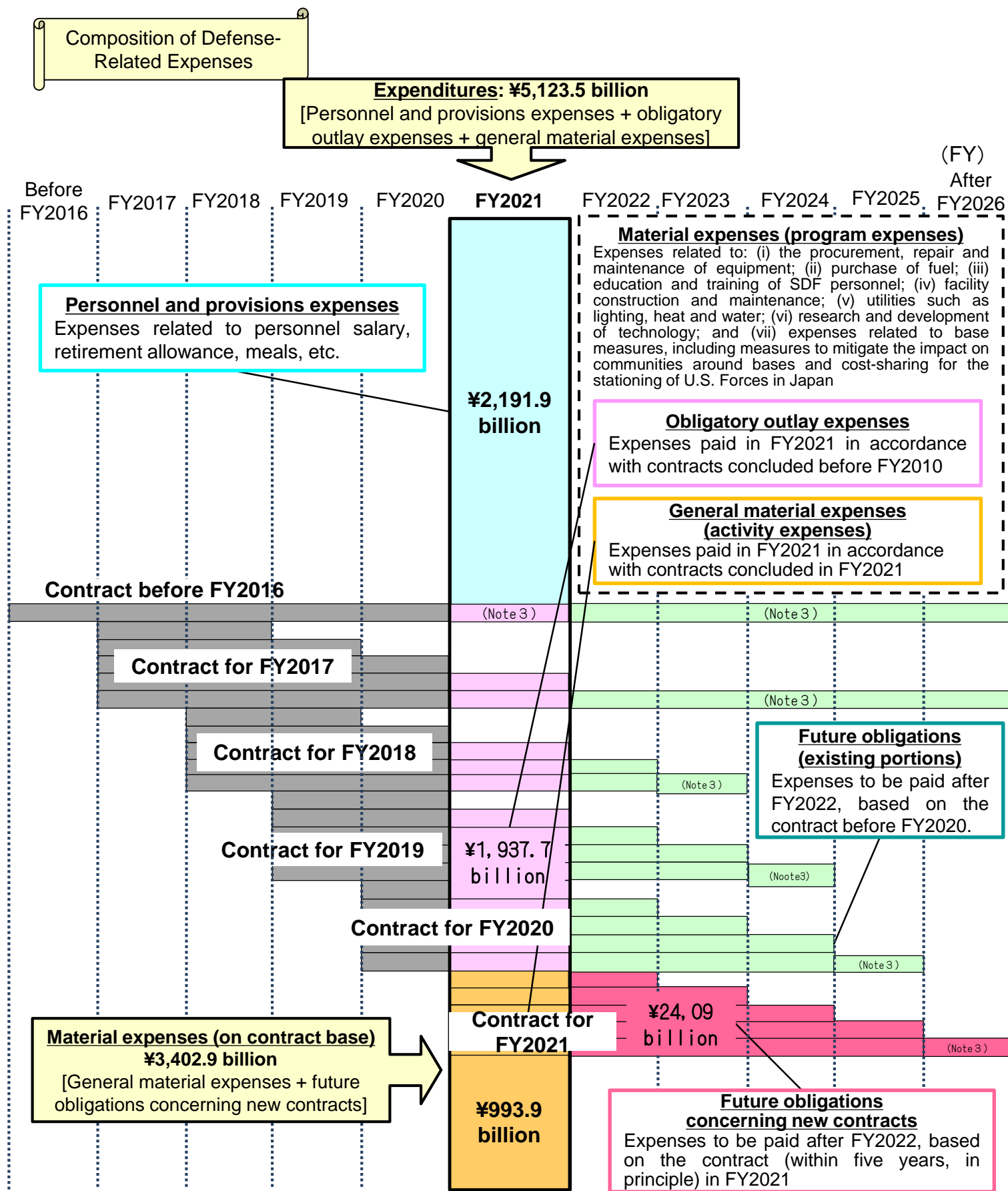
Note 2: Other than that, rationalization of organizational quota by operational reform and request for increase of personnel would take place in JFY2020 and JFY2021 budget requests (JFY2020: 160 personnel, JFY2021: 301 personnel).

Note 3: Number at the end of JFY includes number for promoting employment of persons with disabilities (JFY2018: 24 officials, JFY2019: 41 officials), and the increase does not include this number.

Note 4: Doesn't include the Minister, State Minister, two Parliamentary Vice-Ministers and Senior Advisor to the Minister.

Note5: JFY2021 rationalization etc. includes transfer △8 to Digital Agency.

Reference



Note 1: Exclude SACO-related expenses, and the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities)

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.

Note 4: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥ 18.7billion)

Details and Classification of Material Expenses (Program Expenses)

(Unit: ¥100million)

FY2021	Expenditure base	Contract base
Material expenses (program expenses)	29,316	34,029
Obligatory outlay expenses	19,377	
General material expenses (activity expenses)	9,939	9,939
Future obligations concerning new contracts		24,090

(Note)

○**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 FY2021 (general material expenses) based on the contracts concluded in FY2021 and the expenses to be paid in FY2021 (obligatory outlay expenses) based on the contracts concluded before FY2020. 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 FY2021 and the expenses to be paid after FY2022 (future obligation concerning new contracts) based on the contracts concluded in FY2021. 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

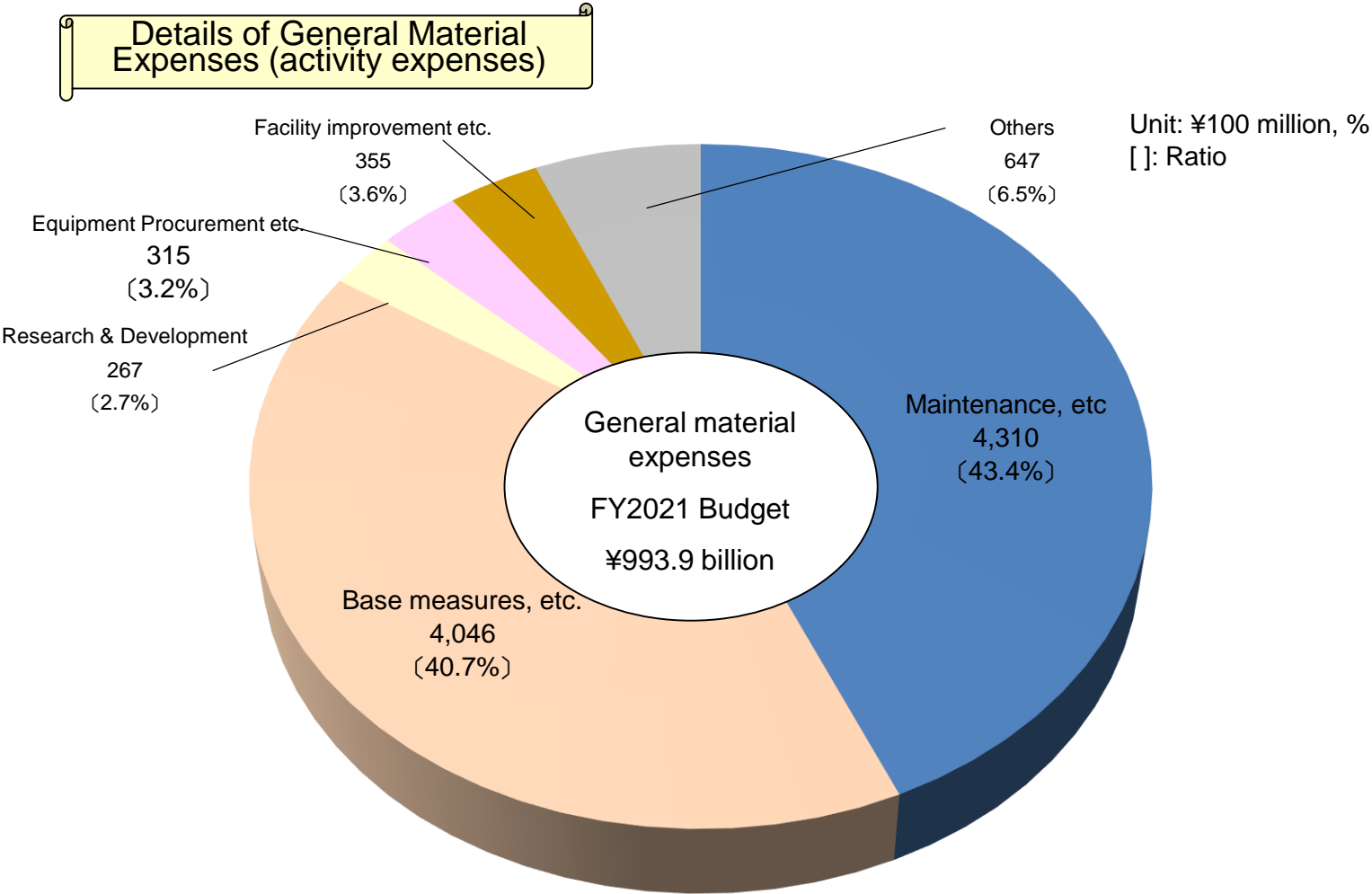
The build-up of defense capabilities, such as procurement of major equipment including vessels and aircraft, as well as construction of hangars and accommodations for SDF personnel, may take several fiscal years. For this reason, the MOD makes contracts for which the span is several fiscal years (up 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.

FY2021	FY2022	FY2023	FY2024
<div>Contract</div> <div>↓</div> <div>Partial payment (¥1 billion)</div> <div>General material expenses</div>	<div>↓</div> <div>Partial payment (¥1 billion)</div> <div>Obligatory outlay expenses</div>	<div>↓</div> <div>Partial payment (¥2 billion)</div> <div>Obligatory outlay expenses</div>	<div>→ Delivery</div> <div>↓</div> <div>Balance payment (¥6 billion)</div> <div>Obligatory outlay expenses</div>
<div>Future obligation (¥9 billion)</div>			

Contract amount (¥10 billion)



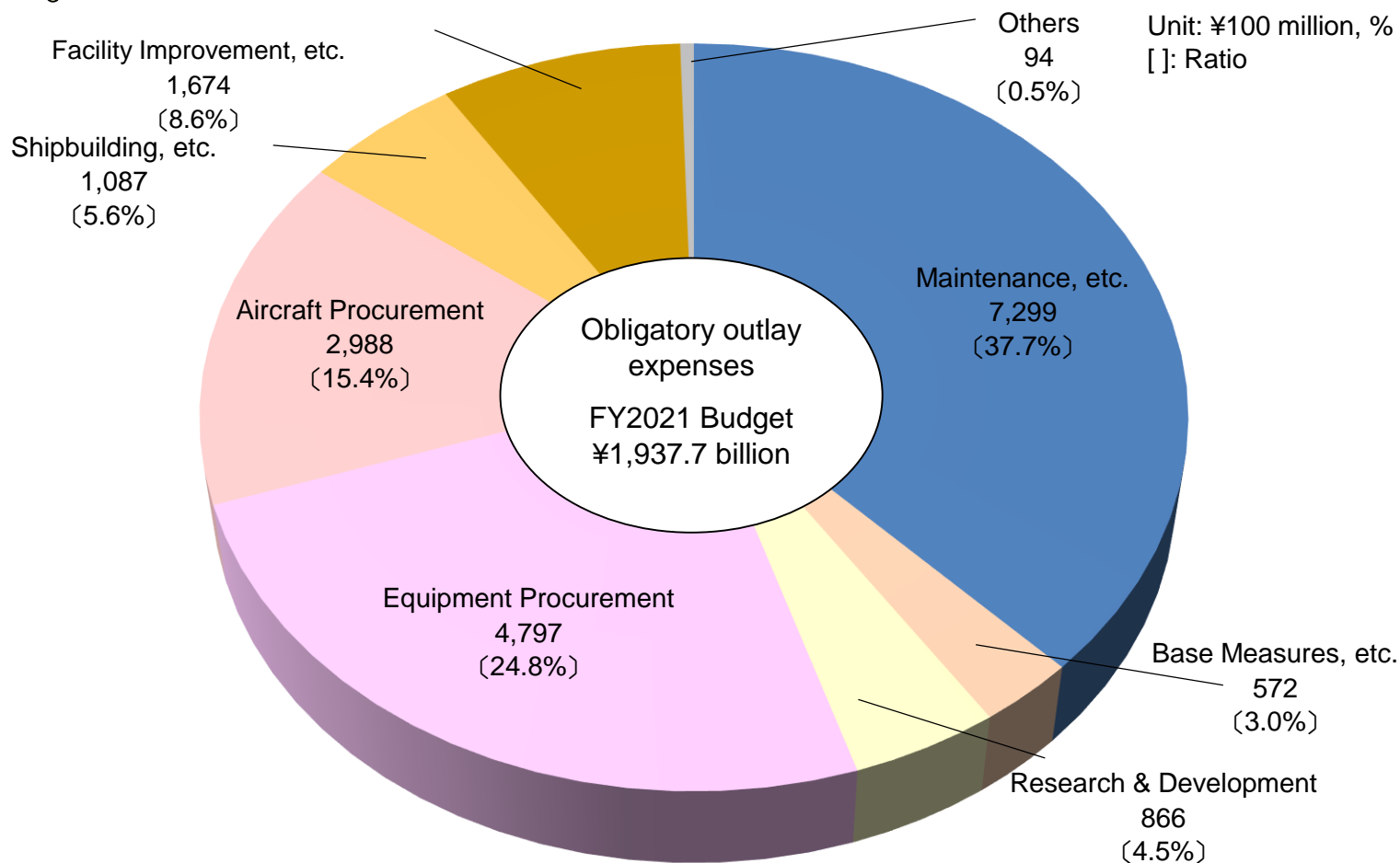
(Unit: ¥100 million)

Item	FY2020 Budget	FY2021 Budget	YoY change
Maintenance, etc.	4, 2 9 0	4, 3 1 0	2 0
• Petrol	9 4 2	7 8 1	△ 1 6 1
• Repair	1, 8 0 7	1, 9 8 8	1 8 1
• Education & training	2 8 7	2 6 8	△ 1 8
• Medical care, etc.	2 6 5	2 8 1	1 5
• Utilities	9 8 9	9 9 1	3
Base measures, etc.	3, 9 9 8	4, 0 4 6	4 8
• Countermeasures in areas near bases	7 7 7	7 9 8	2 1
• Host nation support	1, 8 1 4	1, 8 3 9	2 5
• Rent, compensation costs, etc.	1, 4 0 7	1, 4 0 9	3
Research & Development	2 7 0	2 6 7	△ 4
Equipment procurement, etc.	4 0 7	3 1 5	△ 9 3
Facility improvements, etc.	3 1 6	3 5 5	3 9
Other (computer rentals, etc.)	6 4 4	6 4 7	3
Total	9, 9 2 6	9, 9 3 9	1 4

Note 1: Exclude SACO-related expenses, the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience

Note 2: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥ 4.9billion)

Details of Obligatory Outlay Expenses



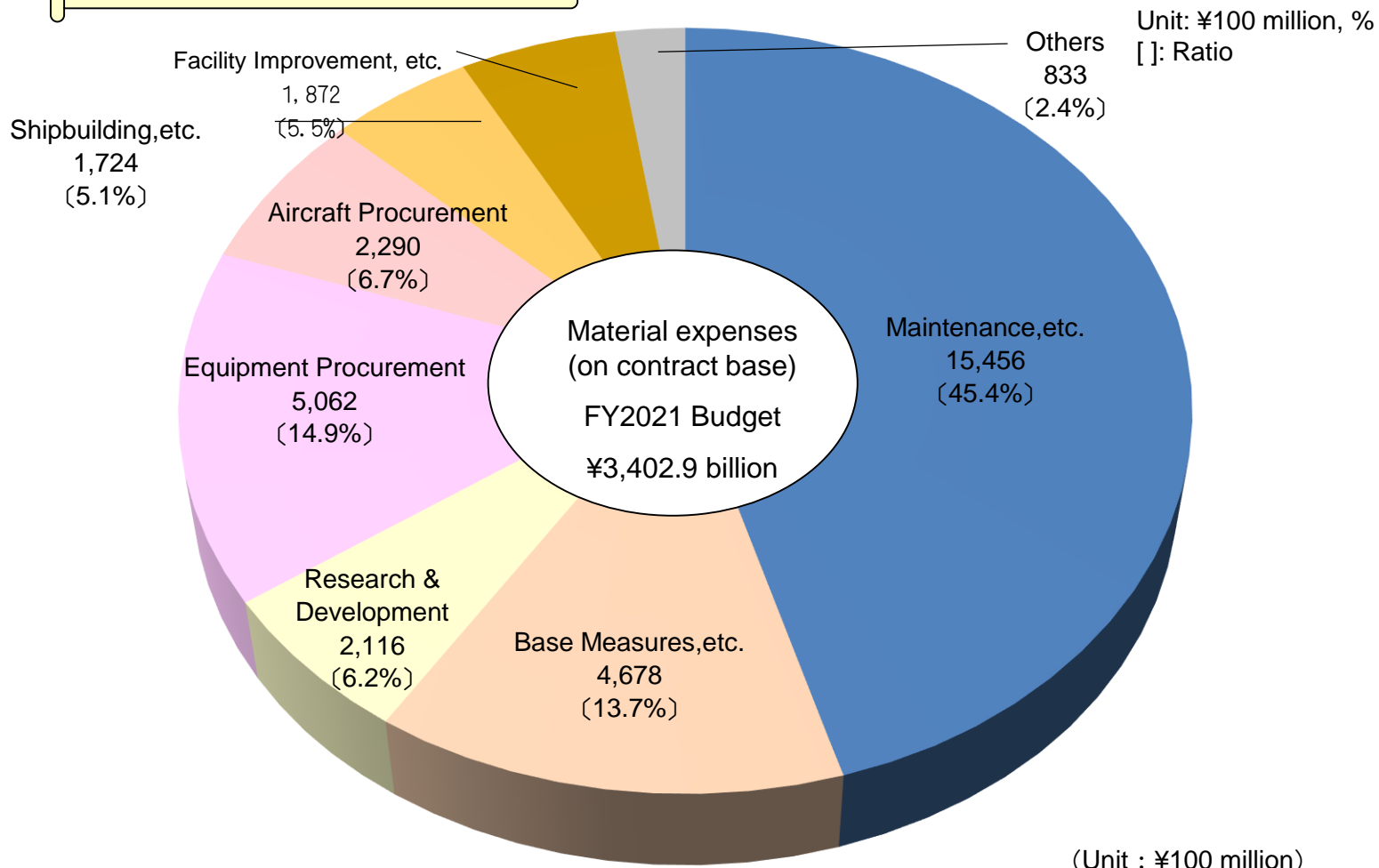
(Unit:¥100 million)

Item	FY2020 Budget	FY2021 Budget	YoY change
Maintenance, etc.	8, 3 2 0	7, 2 9 9	△ 1, 0 2 1
Repair	8, 0 4 2	6, 9 3 6	△ 1, 1 0 7
Education & training, etc.	2 7 8	3 6 4	8 6
Base measures, etc.	5 8 6	5 7 2	△ 1 4
Research & Development	1, 0 0 3	8 6 6	△ 1 3 7
Equipment procurement	4, 0 6 9	4, 7 9 7	7 2 8
Aircraft procurement	2, 6 9 4	2, 9 8 8	2 9 3
Shipbuilding, etc.	1, 3 7 3	1, 0 8 7	△ 2 8 6
Facility improvements, etc.	1, 1 9 6	1, 6 7 4	4 7 8
Other (computer rentals, etc.)	9 5	9 4	△ 1
Total	1 9, 3 3 6	1 9, 3 7 7	4 1

Note 1: Exclude SACO-related expenses, the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience

Note 2: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥ 13.7billion)

Details of Material Expenses (contract base)

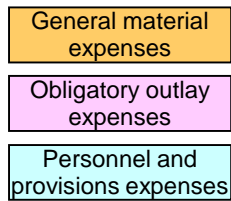


Item	FY2020 Budget	FY2021 Budget	YoY change
Maintenance, etc.	1 3, 7 6 8	1 5, 4 5 6	1, 6 8 8
Petrol	9 4 2	7 8 1	△ 1 6 1
Repair	1 0, 8 9 7	1 2, 6 7 9	1, 7 8 1
Education & training, etc.	1, 9 2 9	1, 9 9 6	6 7
Base measures, etc.	4, 6 7 8	4, 6 7 8	△ 1
Research & Development	1, 6 7 6	2, 1 1 6	4 4 0
Equipment procurement	4, 7 1 2	5, 0 6 2	3 5 0
Aircraft procurement	4, 8 4 4	2, 2 9 0	△ 2, 5 5 5
Shipbuilding, etc.	1, 8 1 7	1, 7 2 4	△ 9 2
Facility improvements, etc.	1, 7 5 7	1, 8 7 2	1 1 4
Other (computer rentals, etc.)	7 2 4	8 3 3	1 0 9
Total	3 3, 9 7 6	3 4, 0 2 9	5 4

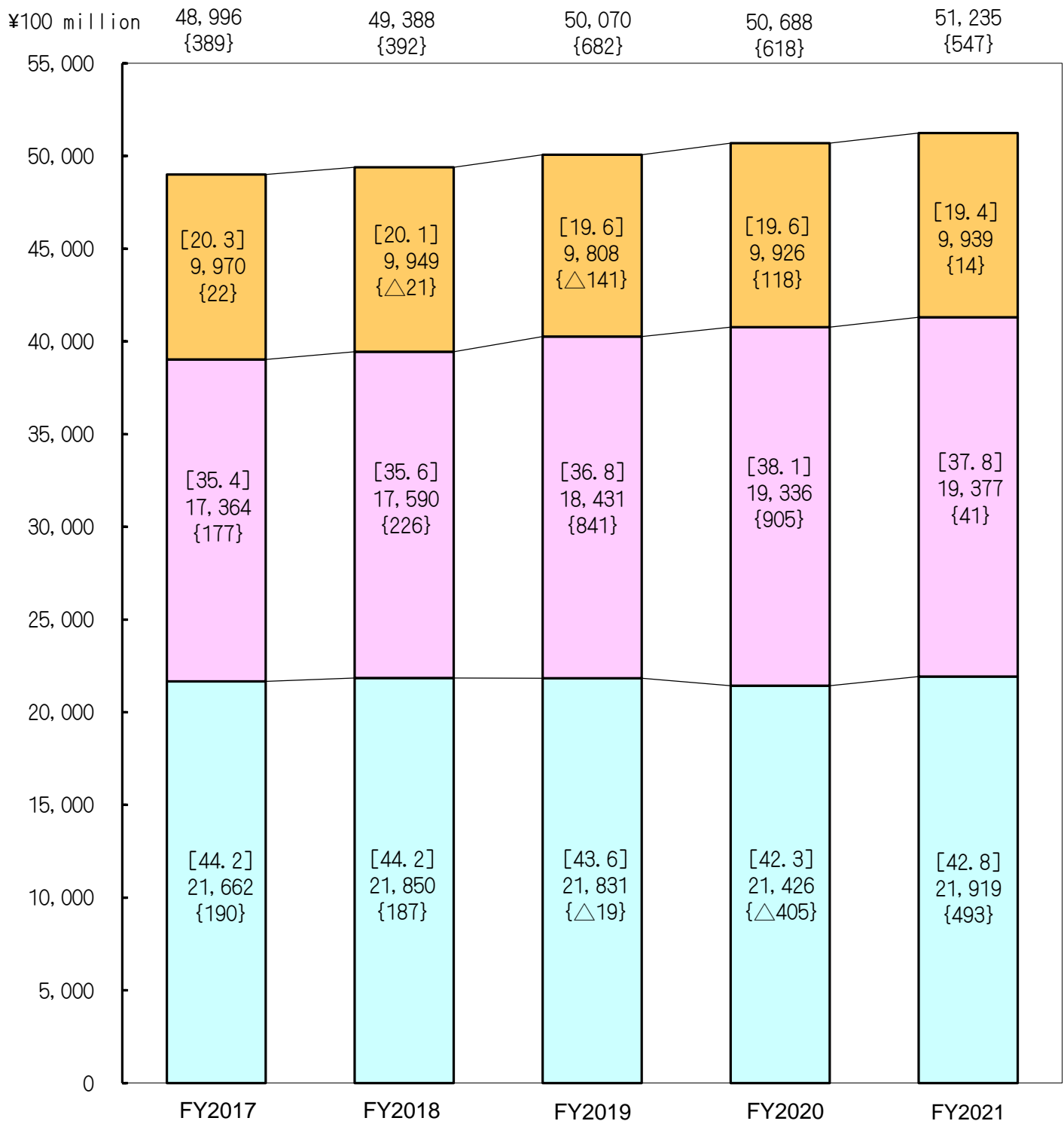
Note 1: Exclude SACO-related expenses, the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience

Note 2: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency(tentative name) (¥ 26.6 billion)

Changes in the Three Categories



[] : Ratio of expenditures (%)
 { } : YoY change



Note 1: Exclude SACO-related expenses, the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience

Note 2: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency (tentative name) (¥ 18.7 billion)

Breakdown by Organization

(Unit: ¥100 million, %)

Categories	FY2020 Budget	FY2021 Budget	YoY change	Growth rate
Defense-related expenses	5 0, 6 8 8	5 1, 2 3 5	5 4 7	1. 1
MOD	5 0, 6 8 8	5 1, 2 3 5	5 4 7	1. 1
(MOD Head Office)	4 8, 8 8 6	4 9, 5 9 3	7 0 7	1. 4
GSDF	1 8, 1 7 3	1 8, 2 6 4	9 2	0. 5
MSDF	1 1, 5 8 9	1 3, 0 8 8	1, 5 0 0	1 2. 9
ASDF	1 2, 4 0 9	1 1, 2 3 7	△1, 1 7 1	△9. 4
Subtotal	4 2, 1 7 0	4 2, 5 9 0	4 2 0	1. 0
Internal Bureau	5, 0 7 2	5, 1 1 2	4 0	0. 8
JS	5 4 8	7 0 1	1 5 2	2 7. 8
Defense Intelligence Headquarters	6 7 2	7 6 3	9 1	1 3. 5
National Defense Academy	1 5 5	1 5 1	△4	△2. 5
National Defense Medical College	2 3 8	2 4 5	7	3. 0
National Institute for Defense Studies	2 3	2 5	2	6. 5
Inspector General's Office of Legal Compliance	8	7	△1	△7. 6
Subtotal	6, 7 1 6	7, 0 0 3	2 8 7	4. 3
(Regional Defense Bureaus)	2 0 4	2 0 4	0	0. 0
(ATLA)	1, 5 9 7	1, 4 3 8	△1 5 9	△1 0. 0

Note 1: Exclude SACO-related expenses, the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience

Note 2: FY2021 budget includes expenditure which will be transferred to Cabinet Secretariat and Digital Agency (tentative name) (¥ 18.7 billion)

Promotion of Measures for Bases, etc.

(Unit: ¥100 million, %)

Classification	FY2020 Budget	FY2021 Budget	Year on Year Change	Growth Rate	Remarks
Promotion of measures for bases, etc.	< 4,678 > 4,584	< 4,678 > 4,618	< △ 1 > 34	< 0.0 > 0.7	
(1) Expenses for measures in areas around bases	< 1,147 > 1,153	< 1,163 > 1,153	< 16 > 0	< 1.4 > 0.0	
Residential sound proofing	< 509 > 518	< 513 > 522	< 3 > 4	< 0.7 > 0.8	Subsidies for sound proofing work near air bases
Improving living environment of the neighboring communities	< 638 > 635	< 650 > 630	< 13 > △ 4	< 2.0 > △ 0.7	Subsidies for the improvement of living environment and facilities (river and road restoration, sound proofing for schools, development of sand control dams and public warfare facilities, etc.)
(2) Cost sharing for the stationing of USFJ	< 2,005 > 1,993	< 2,017 > 2,017	< 13 > 24	< 0.6 > 1.2	
Special Measures Agreement	1,520	1,538	19	1.2	
Labor costs	1,287	1,294	7	0.5	Wages to USFJ local employees
Utilities costs	223	234	12	5.3	Cost of utilities used at USFJ facilities
Training relocation costs	10	10	0	0.9	Expenditures incident to the U.S. Forces Field Carrier Landing Practice at Iwo-To
Facilities Improvement Program	< 219 > 207	< 217 > 218	< △ 1 > 10	< △ 0.7 > 4.9	Improvement of USFJ facilities (barracks, family housing, etc.)
Measures for USFJ employees	266	261	△ 5	△ 1.8	Payment of employer contributions for USFJ local employees' social insurance premiums
(3)Rents for facilities, compensation expenses, etc.	< 1,527 > 1,438	< 1,497 > 1,447	< △ 29 > 10	< △ 1.9 > 0.7	Rents for land areas of defense facilities and compensation expenses for losses of fishers' income, etc.

Note: The above figures are on an expenditure basis (general material expenses + obligatory outlay expenses), and the figures in < > are on a contract basis.

Special Actions Committee on Okinawa
(SACO) Related Expenditures

(Unit: ¥100 million, %)

Item	FY2020 Budget	FY2021 Budget	Year on Year Change	Growth Rate	Remarks
1 Project for land return	< 3 5 >	< 3 3 >	< △ 1 2 >	< △ 2 2 . 0 > △ 3 4 . 2	Implementation of measures included in the SACO Final Report Construction and compensation, etc. to relocate facilities for land return
2 Project for training improvement	< 1 5 1 5 >	< 1 5 1 5 >	< 0 0 >	< 0 . 7 0 . 7 >	Transportation of personnel, etc. to relocate artillery live-fire training previously conducted over Okinawa Prefectural Route 104
3 Project for noise reduction	< 0 0 >	< — — >	< 0 0 >	< N/A . . . > N/A	Implementation of noise reduction initiatives
4 Project for smooth implementation of SACO initiatives	< 1 3 4 1 1 8 >	< 9 9 1 2 6 >	< △ 3 5 8 >	< △ 2 6 . 0 6 . 4 >	
Total	< 1 5 2 1 3 8 >	< 1 1 7 1 4 4 >	< △ 3 6 6 >	< △ 2 3 . 4 4 . 3 >	

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

(Unit: ¥100 million, %)

Item	FY2020 Budget	FY2021 Budget	Year on Year Change	Growth Rate	Remarks
1 Project for relocation of U.S. Marine Corps stationed in Okinawa to Guam	4 1 0	4 4 1	3 1	7. 5	Promote policies to accurately and promptly implement realignment-related measures based on the "GOJ Efforts for USFJ Force Structure Realignment and Others" (approved by the Cabinet on May 30, 2006) and "Immediate Actions by the Government of Japan on Items Decided by the Japan-United States Security Consultative Committee on May 28th, 2010" (approved by the Cabinet on May 28, 2010)
2 Project for realignment in Okinawa	< 1, 6 4 8 > 8 0 7	< 1, 9 0 5 > 7 8 6	< 2 5 7 > △ 2 1	< 1 5. 6 > △ 2. 6	Funding for USMC's relocation from Okinawa to Guam
(1) Relocation of MCAS Futenma	< 8 4 0 > 6 4 4	< 8 4 6 > 5 5 2	< 5 > △ 9 2	< 0. 6 > △ 1 4. 3	Relocation of MCAS Futenma
(2) Return of land areas south of Kadena Air Base	< 8 0 8 > 1 6 2	< 1, 0 6 0 > 2 3 3	< 2 5 2 > 7 1	< 3 1. 2 > 4 3. 9	Return of land areas south of Kadena Air Base
3 Project for relocation of carrier-based aircraft	< 5 > 1	< 7 > 3 1	< 1 > 3 0	< 2 1. 6 > 35. 7 times	Facilities for Field Carrier Landing Practice
4 Project for contingency use	< 4 6 > 4 7	< 2 5 > 2 6 4	< △ 2 1 > 2 1 6	< △ 4 6. 6 > 5. 6 times	Facilities improvements for contingency use
5 Project for training relocation	9 1	9 2	1	0. 7	Training relocation of U.S. aircraft from Kadena Air Base and other airfields to mainland Japan and Guam, etc.
6 Project for smooth implementation of realignment-related measures	< 4 3 7 > 4 4 3	< 4 6 1 > 4 3 1	< 2 4 > △ 1 3	< 5. 5 > △ 2. 8	
(1) Realignment Grants	5 7	4 8	△ 9	△ 1 5. 9	
(2) Measures for areas around bases, etc.	< 3 8 0 > 3 8 7	< 4 1 4 > 3 8 3	< 3 3 > △ 3	< 8. 7 > △ 0. 9	
Total	< 2, 6 3 8 > 1, 7 9 9	< 2, 9 3 0 > 2, 0 4 4	< 2 9 3 > 2 4 4	< 1 1. 1 > 1 3. 6	

Overall of the Supplementary Draft Budget for JFY2020 (Ministry of Defense)

Accumulated amount from Ministry of Defense 【¥3 8 6 . 7 Billion】

(General Material Expenses: ¥6 1 Billion, Obligatory Outlay Expenses : ¥3 2 5 . 7 Billion)

1 Strengthening the capability to respond to various disasters 【¥7 3 . 7 Billion】

Improve SDF's capability to respond to various disasters, given that such capability, for example, transport capability, plays important role.

○ **Maintenance of trucks, etc. 【¥6.8 Billion】**

Accumulating expense to promptly conduct the maintenance the SDF vehicles in order to swiftly transport personnel and relief supplies to the areas of disaster in times of disaster.

《Breakdown》

- 3 1 / 2 t truck 【¥4 Billion】
- 1 / 2 t truck 【¥0. 8 Billion】



1 / 2 t Truck

○ **Procurement of clothing for operations 【¥3.4 Billion】**

Accumulating expense to swiftly procure clothing etc. which will be necessary for activities in disaster areas.



Conducting activities wearing operational clothing

○ **Procurement of C-2 Transport Aircraft 【¥6 0 Billion】**

Accumulating expense to procure C-2 transport aircraft, which is transportation asset to swiftly conduct emergency transportation, disaster relief and transportation personnel and relief supplies to disaster area.

《Breakdown》

- Stable procurement of C-2 【¥42.4billion】
- Procurement of C-2 engine【¥17.7billion】



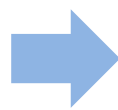
C - 2 Transport Aircraft

2 Enforcement of SDF's Infrastructure Base 【¥10.8Billion】

Enforce SDF's infrastructure base by conducting water resistant measures from the lessons learned from heavy rain in July 2020 and improve SDF camp which became too old and are lacking resistance to earthquake.

○ Measures to cope with camp etc. being flooded 【¥0.5 Billion】

Accumulating expenses necessary for water resistant measures of camp etc. in order to secure continuous operation of unit in the case of disaster etc.

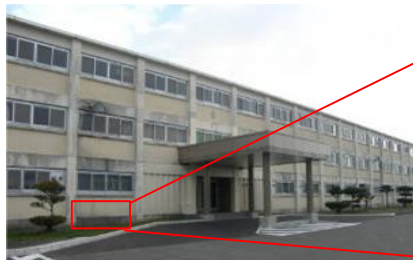


Maintenance of rainwater
drainage channel

○ Earthquake resistant measures to SDF building 【¥2.9 Billion】

Accumulating expenses necessary for earthquake resistant measures of camp etc. in order to secure continuous operation of unit in the case of disaster etc.

<Image>



Reconstruction of the SDF building
which lacks earthquake resistance



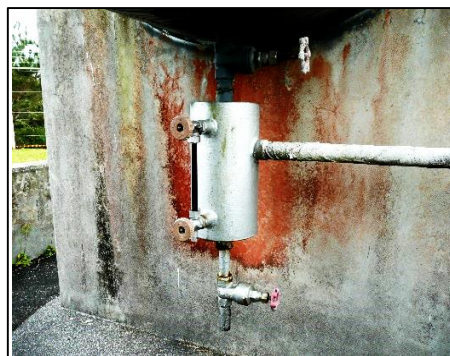
Cracks in the wall

○ Maintenance of SDF camp's equipment facility 【¥4.3 Billion】

Accumulating expenses necessary for maintenance of equipment facility etc. such as boilers etc. in order to secure continuous operation of unit in the case of disaster etc.



Corrosion of fuel tank for
equipment facility



Deficiency in steam line

3 Secure the SDF's stable operational posture 【¥301.7 Billion】

In order to respond to security environment surrounding Japan and to natural disaster, secure SDF's stable operational posture through stable procurement of equipment etc. and sustainment of various equipment.

○ Expense for stable procurement of defense equipment 【¥281.6Billion】

Accumulating expense necessary for front-loading some of the future payment in order to mitigate risks of late delivery for stable procurement of defense equipment

《Breakdown》

- Fixed-wing patrol aircraft(P-1) 【¥23.2Billion】
- Submarine 【¥28.9Billion】
- Surface-to-Air missile patriot 【¥23.3 Billion】
- Middle range Surface-to-Air missile(modified) 【¥14.1 Billion】



Fixed-wing patrol aircraft(P-1)

○ Sustainment of Equipment etc. 【¥3.7Billion】

Accumulating expense necessary for sustainment of aircrafts, vessels etc. for it is necessary to steadily conduct maintenance etc. of equipment in order to respond to security environment which are becoming increasingly testing and to natural disaster which frequently occurs.



Parts of gas turbine engine for vessels



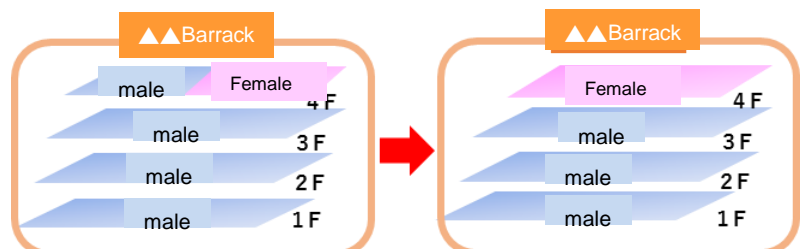
Tire of trucks etc.

○ Improvement of SDF's living/work environment 【¥3Billion】

Accumulating expenses necessary for securing resiliency and conducting preventative measures for spreading of COVID-19 by improving SDF'S work environment as well as conducting expansion etc. of the structure to accept female SDFs.



Supply of Equipment



Expansion of the section for female (Image)

4 Others 【¥0.6 Billion】

- Accumulating expense necessary for SDF's counter-piracy operations and information gathering activities in the Middle East 【¥0.6 Billion】



防衛省
MINISTRY OF
DEFENSE

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Defense Programs and Budget of Japan

Overview of FY2021 Budget

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