

防衛省

Ministry of Defense



Defense Programs and Budget of Japan(Draft)

Overview of JFY2020 Budget

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Defense Programs and Budget of Japan

Overview of JFY2020 Budget Request

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Concept of JFY2020 Budget

1. Japan will steadily improve its defense capabilities as the second year of the “Medium Term Defense Program (JFY2019 – JFY2023)” (MTDP) (approved by the Cabinet on December 18, 2018) based on the “National Defense Program Guidelines for JFY2019 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

(Unit:¥100million)

| Categories | JFY2019 Budget | Year on Year Change | JFY2020 Budget | Year on Year Change |
|---|--------------------------|---------------------------|------------------------|--------------------------|
| | Defense-related Expenses | 50,070 (52,574) | 682[1.4] (663[1.3]) | 50,688 (53,133) |
| Personnel and provisions expenses | 21,831 | △19[△0.1] | 21,426 | △405[△1.9] |
| Material expenses | 28,239 (30,744) | 701[2.5] (682[2.3]) | 29,262 (31,708) | 1,023[3.6] (964[3.1]) |
| Obligatory outlay expenses | 18,431 (19,675) | 841[4.8] (777[4.1]) | 19,336 (20,326) | 905[4.9] (651[3.3]) |
| General material expenses (activity expenses) | 9,808 (11,068) | △141[△1.4] (△95[△0.8]) | 9,926 (11,382) | 118[1.2] (314[2.8]) |

(Note)

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

The amount of the SACO-related expenses are:

JFY2019: ¥25.6 billion; JFY2020: ¥13.8billion

The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:

JFY2019: ¥167.9 billion; JFY2020: ¥179.9billion

Expenses related to the introduction of new government aircraft are:

JFY2019: ¥6.2 billion; JFY2020: ¥30 million

Expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience are:

JFY2019: ¥50.8 billion; JFY2020: ¥50.8billion

4. Exchange rate for JFY2019 defense budget request: US\$1 = JPY110.

【Future Obligation Concerning New Contracts】

(Unit:¥100million)

| Categories | JFY2019 Budget | Year on Year Change | JFY2020 Budget | Year on Year Change |
|------------|--|---------------------|------------------------------|---------------------|
| | Future Obligation Concerning New Contracts | 24,013 (25,781) | 4,074[20.4] (4,617[21.8]) | 24,050 (25,633) |

(Note)

1. []: growth rate (%).
2. The upper figures in each cell does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience. The lower figures in parentheses indicate the expenses that include those above.

The amount of the SACO-related expenses are:

JFY2019: ¥5.5 billion; JFY2020: ¥6.9billion

The U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) are:

JFY2019: ¥160.1 billion; JFY2020: ¥151.3billion

Expenses related to the introduction of new government aircraft are:

JFY2019:[no request] ; JFY2020: [no request]

Expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience are:

JFY2019: ¥11.3 billion; JFY2020: [no request]

3. Details of long-term contract are:

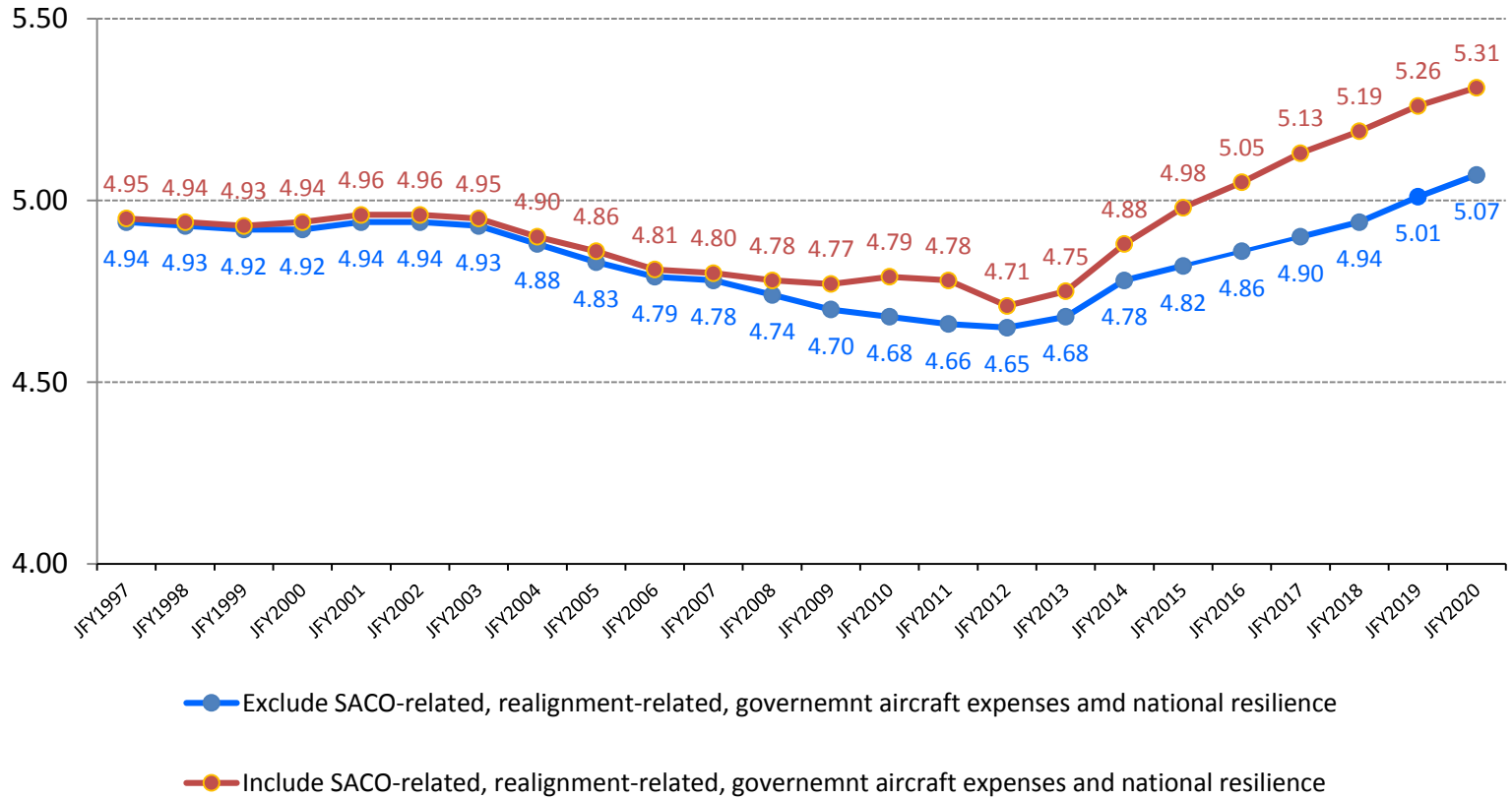
JFY2019: Comprehensive contract for components of PAC-3 missiles (¥3 billion), procurement of Airborne Early-Warning Aircraft (E-2D) (¥186.2 billion)

JFY2020: Comprehensive repair for component of fighter aircraft(F-15)(¥25.6billion)

Transition of the Defense-Related Expense

Transition of the Total Amount

(Unit: ¥1 trillion)



Transition of the Growth Rate

(Unit : %)

| Category | JFY1997 | JFY1998 | JFY1999 | JFY2000 | JFY2001 | JFY2002 | JFY2003 | JFY2004 | JFY2005 | JFY2006 | JFY2007 | JFY2008 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Include SACO-related, realignment related, government aircraft expenses and national resilience | 2.1 | △0.2 | △0.2 | 0.1 | 0.4 | 0.0 | △0.1 | △1.0 | △1.0 | △0.9 | △0.3 | △0.5 |
| Exclude SACO-related, realignment related, government aircraft expenses 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 |

| Category | JFY2009 | JFY2010 | JFY2011 | JFY2012 | JFY2013 | JFY2014 | JFY2015 | JFY2016 | JFY2017 | JFY2018 | JFY2019 | JFY2020 Budet |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| Include SACO-related, realignment related, government aircraft expenses and national resilience | △0.1 | △0.3 | △0.3 | △1.3 | 0.8 | 2.8 | 2.0 | 1.5 | 1.4 | 1.3 | 1.3 | 1.1 |
| Exclude SACO-related, realignment related, government aircraft expenses and national resilience | △0.8 | △0.4 | △0.4 | △0.4 | 0.8 | 2.2 | 0.8 | 0.8 | 0.8 | 0.8 | 1.4 | 1.2 |

Note: The above figures are on an expenditure base.

Notes 1: Numbers in the text represent **expenses, excluding non-recurring costs**, that are required for the production of equipment, unless otherwise specified.

2: Numbers in the text are on **a contract base**, unless otherwise specified.

3: **Blue text** indicates **new programs**.

II Priorities for Strengthening Capabilities Necessary for Cross-Domain Operations

Japan will build a defense capability, which organically fuses capabilities in all domains including space, cyberspace and electromagnetic spectrum; and is capable of sustained conduct of flexible and strategic activities during all phases from peacetime to armed contingencies, as security environment surrounding Japan becomes more testing and uncertain at remarkably fast speeds.

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

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

(1) Capabilities in Space Domain

- Establishment of Space Operations Squadron (tentative name)
 - Establish "Space Operations Squadron (tentative name)" in ASDF (approx.20 personnel) to secure superiority in using outer space
 - Establish "Space Domain Planning Section (tentative name)" in C4 Systems Division, C4 Systems Department, Joint Staff.
 - Establish "2nd Project Planning Division (tentative name)" in Defense Department and "Space Communication and Electronic System Section (tentative name)" in Maintenance and Supply Division, Logistics Department, Air Staff Office.
 - Acquire knowledge concerning matters related to outer space by dispatching personnel to the Space Operations Course provided at U.S. Air Force base in the U.S. state of Colorado.

- Capability to Secure Stable Use of Outer Space (¥22.3billion)
 - Research and Study on capability to disrupt opponent's C4I in collaboration with electromagnetic domain
 - Procure devices to grasp the state of electromagnetic interference against Japanese satellites
 - Procurement of Space Situational Awareness(SSA) Satellite (Space-Based Optical Telescope)

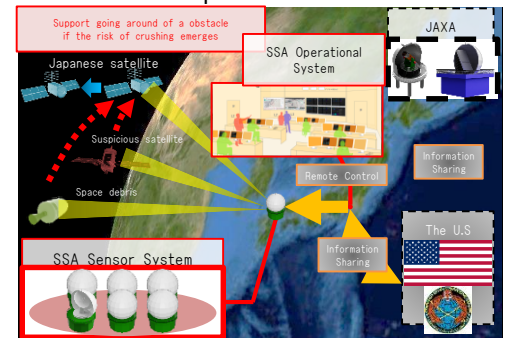
Procure components of SSA satellite to grasp characteristic of debris and unknown subject flying around X-band defense communication satellite on the orbit of stationary satellite.

 - Procurement of SSA System

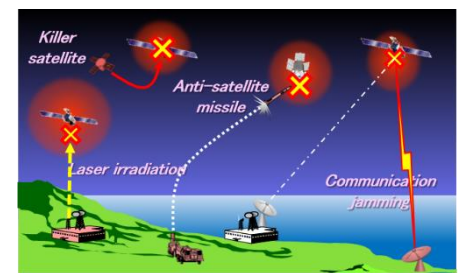
Procure necessary related components to perform SSA in cooperation with the U.S. and the relevant domestic organizations.

Space-related budget:¥50.6billion*

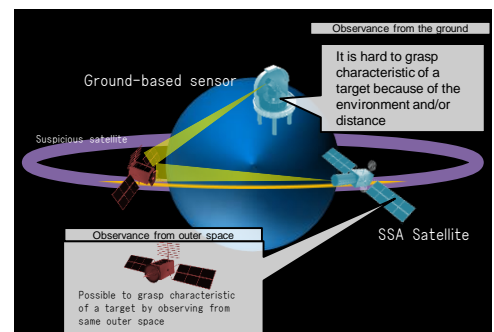
* Excluding the portion related to ballistic missile defense allocated for space.



Space Situational Awareness System and its Operation (conceptual image)



Threat against Stable Use of Outer Space (conceptual image)



SSA Satellite (conceptual image)

- Strengthening Information-Gathering Capability Using Outer Space (¥4.3 billion)
 - Research about infrared sensing element with high sensibility and broadband.
 - Research and study on surveillance utilizing satellite.
 - Demonstration of Satellite-Integrated Dual-Band Infrared Sensor

- Utilization of Satellite Communication (¥13.7billion)
 - Enhance resiliency of satellite communication system
 - Modification to equipment, etc. to adapt to the X-band communication satellite.
 - Leasing of commercial communication satellite lines, development and maintenance, etc. of satellite communication equipment.



X-band Defense Communication Satellite (conceptual image)

- Use of Data from Imagery Satellites (¥10.1billion)
 - Procurement of data for image analysis (various commercial satellites, including earth observation miniature satellites, etc.)
 - Utilizing Meteorological satellites
 - Acquiring satellite information which contributes to maritime surveillance

- Other Measures related to Space Policy (¥130million)
 - Acquire knowledge concerning matters related to outer space by dispatching personnel to the Space Operations Course provided at U.S. Air Force base in the U.S. state of Colorado.(repost)
 - Participate in multilateral table-top exercises in the field of outer space.
 - Involvement in international effort to establish international rule regarding space domain

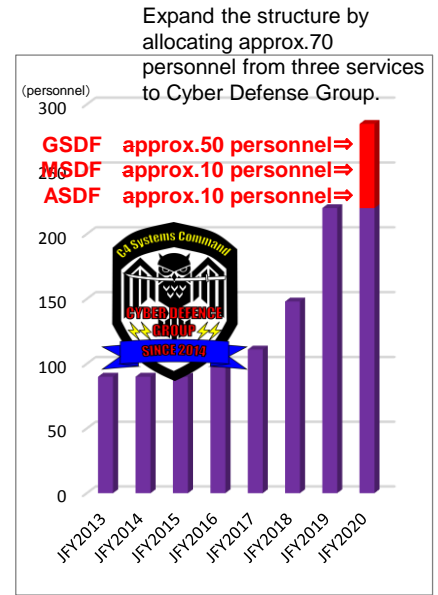
* Budget related to BMD (only the space-related portion): ¥52.3 billion

Cyber-related budget: ¥25.6billion

(2) Capabilities in Cyber Domain

Enhance posture of Cyber Defense Group etc.

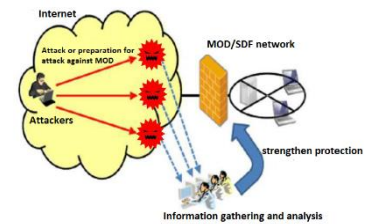
- Expand Cyber Defense Group (from approx.220 personnel to approx. 290 personnel)
 Increase the number of Cyber Defense Group (joint unit) workforce by approx. 70 personnel in order to further strength cyber defense capability
- Establish Cyber Protection Unit (tentative name) in GSDF
 Establish Cyber Protection Unit (tentative name) under the System and Signal Brigade which belongs to the Ground Component Command (GCC) in order to create a posture to effectively protect network systems of GSDF.



Expansion of Cyber Defense Group structure

Utilizing Cutting-Edge Technology in the Field of Cyberspace

- Procure Cyber Information Gathering System (¥3.4billion)
 Procure cyber information gathering system in order to gather information on the tactics, techniques and procedures (TTPs) of cyber attacks against the MOD/SDF.
- Design a AI-enabled System to Respond against Cyber Attack. (¥30million)
 Autonomously distinct malicious e-mails and judge the level of threat by utilizing AI
- Research and Study on the Security of Network Devices (¥20million)
 Conduct a research on cybersecurity measures for network devices used by the MOD/SDF in 5G era.



Cyber information gathering system (conceptual image)

Secure/Develop Cyber Workforce

- Join the U.S. Cyber Commander Education Courses (¥40million)
 Participate in courses at the U.S. educational institutions such as National Defense University (NDU) to learn knowledge and skills required for the commanders in cyber warfare
- Develop Posture of Internal Knowledge and Skills on Cyber
 Secure and develop cyber workforce, (1) Establish “Cyber Instructor’s Office” (tentative name) that would be responsible for common cyber education course for all services in GSDF Signal School (2) Prepare to establish “System/Cyber Specialized Course (tentative name)” in GSDF High Technical School (HTS) (planned to start in JFY2021)

- Host a cyber competition “MOD-CTF” (tentative name)* (¥4million)
Discover cyber talents by hosting open-public cyber competition.

*MOD-CTF stands for; Ministry of Defense - Capture the Flag



Cyber competition (conceptual image)

Improve System Network

- Improvement of the Defense Information Infrastructure (closed) (¥7.6billion)
Improve the closed system of the DII to prevent cyber attacks by internal intruders, etc.
- Improvement of Controllability and Situation Awareness of System Network (¥1.2billion)
Improve the system to conduct necessary security measures effectively by unilaterally managing the situation and status of all system networks operated by the GSDF.

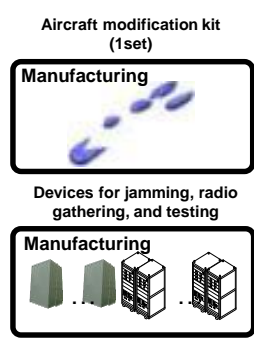


Improvement of administrative capability for system network (conceptual image)

3. Strengthening Capability in Electromagnetic Domain

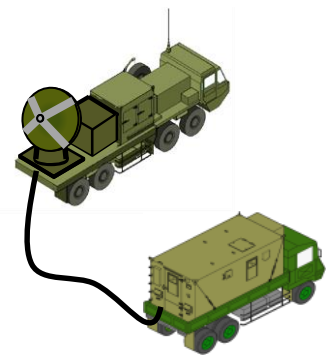
Research and Development of Equipment for Neutralizing the Radar of the Opponent Invading Japan

- Development of Stand-off Electronic Warfare Aircraft (¥15billion)
Development of stand-off electronic warfare aircraft to support SDF air operation by conducting effective communication jamming



Development of stand-off electronic warfare aircraft (conceptual image)

- Conduct Research on Anti-air Electronic Warfare Device (¥3.8billion)
Procure and research the device that neutralizes the radar of invading aircraft by emitting radio waves from the ground



Research on anti-air electronic warfare device (conceptual image)

Strengthen Capability to Minimize Electromagnetic Jamming from Opponent Attempting to Invade Japan

- Procurement of F-35A (3 aircraft:¥28.1billion)
Procure F-35A with superior electronic protection capability and secure air superiority. Include another ¥37.4billion in the request as other related cost (maintenance equipment etc.)



F-35A Fighter Jet

* By the efforts to decrease cost such as reducing man-hour thanks to gained experience, it is confirmed that having Final Assembly and Check-Out (FACO) done by domestic firm will be cheaper than importing completed aircraft. Japanese company will perform FACO for F-35As procured in JFY2019 and JFY2020.

- Procurement of F-35B (6 aircraft:¥79.3billion)
Procure F-35B with superior electronic protection capability and improve flexibility of fighter operation. Include another ¥23.5 billion as other related cost (maintenance equipment etc.)



F-35B Fighter Jet

- Improvement of F-15's Capability
Improve electronic warfare (EW) capability of F-15 by upgrading program.
*See p.13 for the detail of the program



Upgrading F-15 Fighter Jet

- Procurement of Network Electronic Warfare System (¥10billion)
Improve the GSDF's network electronic warfare system to have an advantage in operations by collecting and analyzing signals and jamming communication.



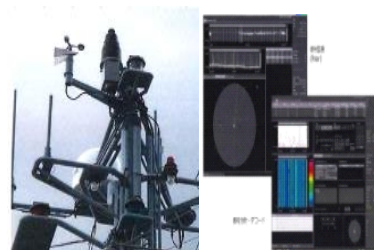
Network Electronic Warfare System

Improve posture of Electronic Warfare Unit

- Establish an Electronic Warfare Unit
Establish an electronic warfare unit and introduce network electronic warfare system in GSDF in order to strengthen operational capability in electromagnetic domain.
- Restructure an Intelligence Unit
Restructure MSDF Fleet Intelligence Command in order to strengthen information analysis capability including electromagnetic information.

Strengthening Intelligence Capability related to Electromagnetic Spectrum

- Research for Upgrading Radio Wave Information Collecting Device for Vessels (¥600million)
Conduct research for improving radio wave information collecting capability of vessels by procuring radio detecting and radio management device for vessels as samples.



Research for Improving Capability of the Vessels in Electromagnetic Domain

Improving Electromagnetic Spectrum Management Capability

- Research on Technology to Support Electromagnetic Spectrum Management by Visualizing a Usage of Electromagnetic Spectrum Resources (¥900million)
In order to appropriately execute electronic warfare, start the research on electromagnetic spectrum management support technology for visualizing the usage of electromagnetic spectrum resources.

Strengthening Posture of Communication and Information Sharing

- Improve Maritime Tactical Intelligence Processing System (MTIPS) (¥2.6billion)
Improve tactical intelligence processing system for prompt sharing of electromagnetic information etc.
- Improve the Tactical Datalink (¥5.9billion)
Improve the tactical datalink of aircraft and vessels for swift forwarding/sharing of the target information.

Facility Protection Measure against EMP Attack

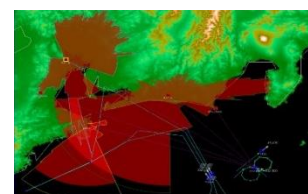
- Conduct verification test of necessary equipment for protection of SDF facilities against EMP such as power filter and study on EMP countermeasures for the facilities based on the result of tests (¥100million)



Participate in command post exercise by Royal Navy (conceptual image)

Training/Exercise, Developing Personnel

- Participate in Command Post Exercise Hosted by Royal Navy (¥0.6million)
Participate in comprehensive exercise including electromagnetic domain hosted by Royal Navy.
- Retrofit Educational Device for Electronic Warfare (¥200million)
Effectively develop personnel by starting on retrofitting educational device for electronic warfare in ASDF for maintaining and strengthening capability in electromagnetic domain.
- Dispatch Personnel to an Educational Course of Electronic Warfare in the U.S(¥4million)
Dispatch personnel from 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.



Educational Device to Electronic Warfare (conceptual image)

2 Enhancing Capabilities in Traditional Domains

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

(1) Capabilities in Maritime and Air Domains

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

- Procurement of Fixed-Wing Patrol Aircraft (P-1)
(3 aircraft:¥ 63.2billion)
In response to decommissioning of existing fixed-wing patrol aircraft (P-3C), procure upgraded P-1 as its successor.

* Target identifying ability, flight performance and intelligence processing capability improved compared to conventional P-1 aircraft.



Fixed-Wing Patrol Aircraft (P-1)

- Life Extension of Fixed-Wing Patrol Aircraft (P-3C)
(7 aircraft:¥ 3.4billion)
Implement life extension measures for P-3C to maintain the number of fixed-wing patrol aircraft.



Fixed-Wing Patrol Aircraft (P-3C)

- Procurement of Patrol Helicopter (SH-60K)
(7 helicopters:¥49.8billion)
In response to decommissioning of current patrol helicopter of MSDF (SH-60J),procure SH-60K as its successor.

*Cost for aircraft acquisition decreased by ¥5.1billion as a result of joint bulk procurement with ASDF rescue helicopter (UH-60J)



Patrol Helicopter (SH-60K)

- Refurbishment of Patrol Helicopters (SH-60K) to rescue specification
(2 helicopters: ¥1.9billion)
Refurbish SH-60K to rescue specification to maintain rescue capability.

- Life Extension of Patrol Helicopters (5 helicopters: ¥9billion)
Implement life extension measures for three SH-60K and two SH-60J to maintain the number of patrol helicopters.

- Life Extension of Imagery Intelligence Gathering Aircraft (OP-3C) (¥400million)
Implement life extension measures for imagery intelligence gathering aircraft (OP-3C) to maintain the number of reconnaissance aircraft.



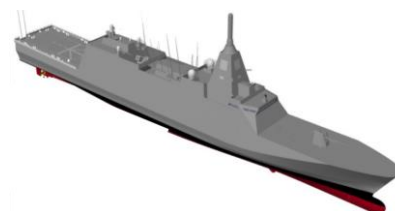
Imagery Intelligence Gathering Aircraft (OP-3C)

- Life Extension of Signal Reconnaissance Aircraft (¥200million)
Prior to implementing life extension measure for EP-3 to maintain the number of signal reconnaissance aircraft, conduct a fatigue evaluation to confirm health of airframe structure.



Signal Reconnaissance Aircraft (EP-3)

- Construction of Destroyers (2 ships:¥94.4 billion)
Construct 2 destroyers (fifth and sixth ships of FFM (3,900t class) built in JFY2018), equipped with compact hulls and improved multi-role capability (such as mine countermeasures, which were conventionally served by minesweeping vessels); bringing the total number of destroyers to 54.



*JFY2020 Destroyer(FFM) (3,900t)
(conceptual image)*

- Life Extension of Destroyers (life extension for 7 ships and parts procurement for 5 ships:¥8.3billion)
Implement life extension measures for the Murasame-class, Kongo-class, Asagiri-class and Abukuma-class destroyers to maintain the number of destroyers.

- Construction of a Submarine (1 ship:¥70.2billion)
Construct a submarine (fourth ship of new class ship (3,000t class) built in JFY2017) with enhanced capabilities (detection, etc.) to effectively carry out intelligence and surveillance activities in the surrounding sea with 22 submarines.



*JFY2020 Submarine (3,000t)
(conceptual image)*

- Life Extension of Submarines (life extension for 3 ships and parts procurement for 7 ships:¥2.4billion)
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
(2900t)*

- Construction of a Minesweeping vessel (1 ship:¥12.6billion)
Construct a minesweeping vessel (forth ship of Awaji-class ship(690t class) with enhanced mine countermeasure capability, and FRP-made, which has higher durability than wooden construction.



Awaji-class Minesweeping Vessel(690t)

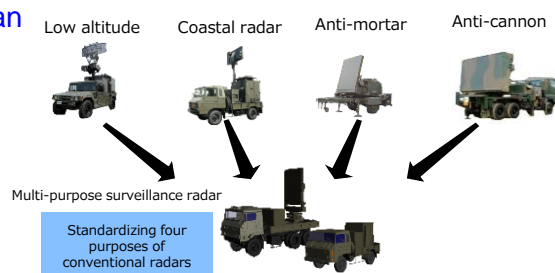
- Procure Initial Parts for Airborne Early Warning Aircraft (E-2D) (¥38billion)
Bulk-procurement of necessary initial parts for airborne early warning aircraft to strengthen ISR capabilities in airspace around Japan including vast air space on the Pacific side.
- Improvement of Capability of Electronic Warfare Information of the Japan Aerospace Defense Ground Environment (JADGE) (¥1.7billion)
Add a buffer system align with development of new warning and control radar to deal with future airborne threat

- Establish a Temporal Unmanned Aerial Vehicle Unit (tentative name)
As introducing long endurance unmanned aerial vehicle(Global Hawk), establish a temporal unmanned aerial vehicle unit(tentative name) in JASDF to structure a posture which enables effective procurement and sustainment of equipment, training, and testing.



Long-endurance unmanned aerial vehicle (RQ-4B) Global Hawk (picture: same type of UAV)

- Develop Multi-purpose Surveillance Radar(¥800million)
Develop multi-purpose radar which can detect threats of an adversary with low observability, and by a effort of standardizing respective radars which GSDF has(low altitude, coastal, anti-mortar, anti-cannon), reduce production cost and LCC while improving maintainability and interchangeability.



Multi-purpose Radar (conceptual image)

* Total cost reduction of ¥26.2billion is expected by standardizing four conventional radars into one because it reduces development cost and future maintenance work.

Obtaining and Maintaining Air Superiority

- Procurement of F-35A(repost)



F-35A

- Procurement of F-35B(repost)



F-35B

- Upgrade of F-15 (¥39billion)
Upgrade to integrate stand-off missiles, increase ammunition payload, and improve electronic warfare capabilities in order to provide effective defense against surrounding countries' modernized air forces as well as fulfilling various duties.

- Upgrade of F-2 (2 aircraft:¥2.6billion)
Designing to upgrade current fighter, improve anti-ship capability and networking capability in order to provide effective defense against surrounding countries' modernized air forces as well as fulfilling various duties.



F-2

- Procurement of Aerial Refueling and Transport Aircraft (KC-46A) (4 aircraft:¥105.2billion*)

Procure aerial refueling and transport aircraft for fighter units to obtain capability to sustainably conduct various operation surrounding Japan, including the vast airspace of the Pacific

* Cost reduction by ¥120billion by bulk-procuring four aircraft. Part of acquisition and related cost will be requested in or after JFY2021 budget request.



Aerial refueling and transport aircraft (KC-46A) (conceptual image)

- Establish a Squadron for Aerial Refueling and Transport
Establish a squadron with KC-46A as its main asset for aerial refueling and transport in order to strengthen aerial refueling and transport for fighter units to conduct various operations sustainably and broadly.

- Refurbishment of Destroyer "Izumo" (¥3.1billion)
Conduct partial refurbishment which enables takeoff and landing by F-35B.



Destroyer "Izumo"

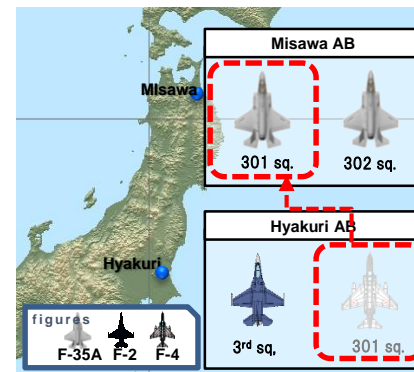
- Procurement of Rescue Helicopter (UH-60J) (3 helicopters:¥15.6billion)
Dealing with decreasing number of UH-60Js in ASDF, and to maintain/improve the number of rescue helicopter as well as improve the posture to practically cope with various situations.

*Reduction by ¥1.6billion from air vehicle acquisition cost as a result of joint purchase with MSDF's patrol helicopter (SH-60K)



Rescue Helicopter (UH-60J)

- Shifting the Posture of Fighter Squadrons, etc.
 - Shift the posture of fighter squadrons to develop readiness for ensuring air superiority.
 - Establish F-35A squadron in Misawa AB and restructure F-4 squadron in Hyakuri AB in accordance with the shift from F-4 to F-35A.



Shifting the posture of fighter squadrons, etc.

- Procurement of Type-03 Middle-Range Surface-to-Air Missile (modified) (1 set:¥13.8billion)

Procure the Type-03 medium-range surface-to-air missile (modified) with enhanced capability to respond to low-altitude and high-speed targets in order to strengthen air defense capability.



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

- Procurement of Air Defense Command and Control System (1set:¥3.2billion)
Procure the air defense command and control system for GSDF to ensure effective joint response operations against airborne threats.



Air Defense Command and Control System

F-X (¥28billion, including related cost)

- Japan-led Development of F-X (¥11.1billion)
Launch Japan-led development with a scope of international collaboration regarding fighter aircraft which can play a core role of future networked warfare. (Start on conceptual designing process of overall system of fighter aircraft)

- Research on the Integration of the Mission System of a Fighter (¥7.6billion)
Mission system integration research, to enable Japan's freedom into the future for control over the mission system, which is central to a fighter's operational and mission execution capability.



F-X(conceptual image)

- Research on Technology for Remote Control Support Aircraft Technology (¥100million)
Conduct research related to human machine interface technology necessary for formation flight technology and remote control, which are required for future remote-control support aircraft that can assist manned aircraft.
- Strengthen Posture for Development of Future Fighter
Establish "Fighter (F-X) Development Division" in ATLA to effectively implement F-X development

Obtaining and maintaining maritime superiority

- Procurement of Fixed-wing Patrol Aircraft (P-1) (repost)
- Life Extension of Fixed-wing Patrol Aircraft (P-3C) (repost)
- Procurement of Patrol Helicopters (SH-60K) (repost)
- Life Extension of Patrol Helicopters (repost)
- Construction of Destroyers (repost)
- Life Extension of Destroyers (repost)
- Construction of a Submarine (repost)
- Life Extension of Submarines (repost)
- Construction of Minesweeping Vessels (repost)
- Introduction of Small UUV for Underwater Defense (¥7.5billion)
 In order to ensure the safety of SDF personnel, introduce the UUV which can be deployed to targeted waters by remote control and prevent the opponent vessel from invading Japan.



Small UUV for Underwater Defense
(conceptual image)

- Development of ASM-3 (modified) (¥10.3billion)
 In order to deal with modernization of vessels in other countries, improve the shooting range of Air-to-Ship Missile which has higher survivability because it can fly at supersonic speed.



ASM-3 (modified)
(conceptual image)

(2) Stand-off Defense Capability

- Procurement of Stand-off Missile (¥13.6billion)
 Procure stand-off missile(JSM) which can react from outside of the opponent's threat range and can be mounted to F-35A.
- Procurement of F-35A (repost)
- Upgrade of F-15 (repost)



Stand-off Missile (JSM)

(3) Comprehensive Air and Missile Defense Capability

BMD-related budget :¥1 1 6 . 3 billion

- Procurement of Vertical Launching System (VLS) for GSDF Aegis Ashore (¥11.5billion)



Vertical Launching System (VLS) (conceptual image)

Aegis Ashore-related cost (¥12.9billion)
 • Procurement of VLS (¥11.5billion)
 • Other related cost such as for research (¥1.4billion)
 (Does not include cost based on the assumption of a specific deployment site)

- Procurement of SM-3 Block II A (¥30.1billion)
Procure SM-3 Block II A for BMD purpose.



SM-3 Block II A

- Modification to the Patriot system (¥9billion)
Modify the patriot system to operate PAC-3 MSE missile

*As a result, all fire units will be able to operate PAC-3 MSE in JFY2022.



PAC-3 MSE Missile (photo: same model)

- Research and Study on the Concept of the Comprehensive Air and Missile Defense Capability (¥50million)
Research and Study on strengthening the comprehensive air and missile defense capability, future airborne threat and means to respond to such threats



Comprehensive air and missile defense capability (conceptual image)

- Upgrade of JADGE (repost)
- Procurement of Type-03 Middle Range Surface-to-air Missile (modified) (repost)
- Procurement of Air Defense Command and Control System (repost)

- BMD Exercises
Improve SDF's capabilities of BMD and enhance operational coordination with the U.S. Forces.



BMD Exercises (conceptual image)

(4) Maneuver and Deployment Capability

- Procurement of Type-16 Mobile Combat Vehicles (33 vehicles:¥23.7billion)
Strengthen rapid deployment capabilities of the basic operational units (rapid deployment division and rapid deployment brigade) by deploying Type-16 mobile combat vehicles suited for transportation by aircraft and other mean.



Type-16 Mobile Combat Vehicle

- Procurement of Type-19 155mm Wheeled Self-Propelled Howitzers (7 vehicles:¥4.5billion)
As the successor of the existing 155mm field howitzer (FH70), procure the 155mm wheeled self-propelled howitzer, which is capable for the operation with quick and maneuver in various situations and can be also contributed for its efficiency.



Type-19 155mm Wheeled Self-Propelled Howitzer (prototype)

- Procurement of Transport Helicopters (CH-47JA) (3 helicopters:¥22.8billion)
Procure transport helicopter (CH-47JA) which can conduct airborne maneuver and transport of units with heavy equipment or large quantity of payloads.
*cost reduction of ¥3.4billion by bulk-procurement of three helicopter



Transport Helicopter (CH-47JA)

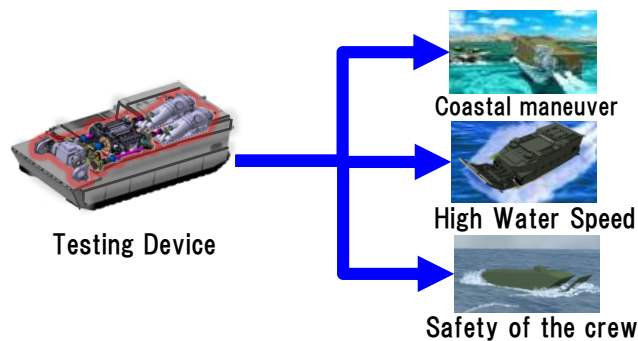
- Procurement of Engines for C-2 Transport Aircraft (6 sets:¥22billion)
In view of the decreasing number of the current transport aircraft (C-1), procure the engines for transport aircraft that contribute to the large scale deployment by improving flight range and payload



Transport Aircraft (C-2)

* Cost-reduction by approx. ¥4.8billion by bulk-procurement of 6 sets

- Research on Testing Device for Future Amphibious Technology (¥1.7billion)
 Make prototype of testing device for future amphibious vehicle and validate technology for coastal maneuver, high water speed and safety of the crew.



Research on Testing Device for Future Amphibious Technology (conceptual image)

- Improvement of Facility Related to the Deployment of the Units
 - Development related to an area security unit in the southwestern region (¥22.8billion)
 In order to improve the initial response readiness in the defense of remote islands, allocate budget related to the development of barrack and other SDF facilities related to the deployment of guard unit in Ishigaki-jima island, roads etc. within the Bora area in Miyako-jima island, and ammunition depot in Amami-oshima island (Setouchi-detachment)
 - Base Improvement for GSDF Ospreys(¥3billion)
 Design and site construction as base measures for GSDF Ospreys (associated with the Saga airport)



Key Facilities Associated with Unit Deployment (conceptual image)

- 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

- Japan-US Bilateral Joint Exercise (Field Training Exercise (FTX))
 Enhance SDF's capability for joint operation and interoperability between Japan and US by conducting FTX on Japan-US bilateral response for defense of Japan. Also, conduct joint communication training (field training) to improve readiness regarding electromagnetic domain.



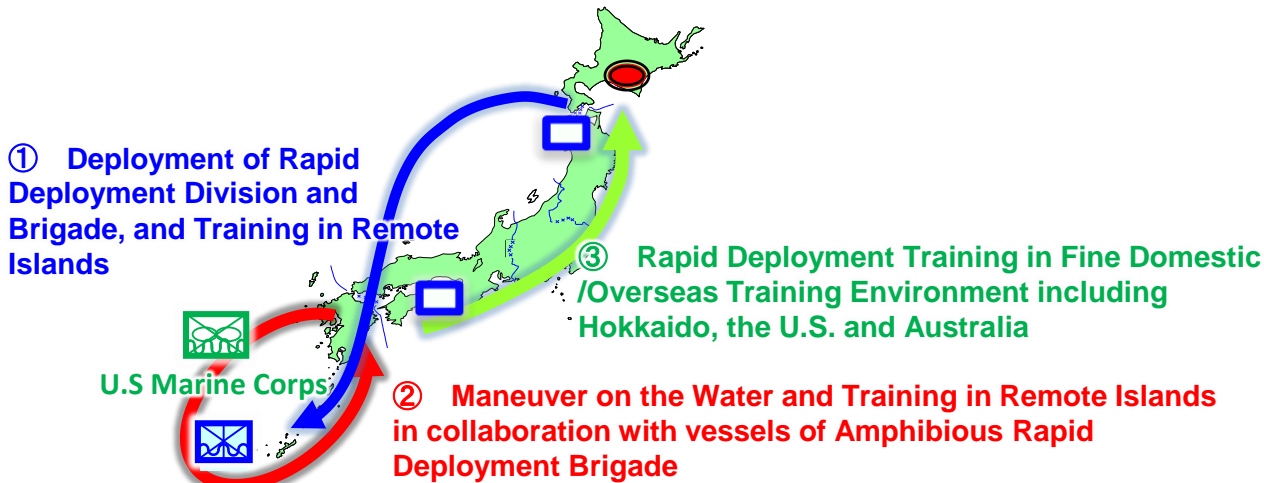
Japan-US Bilateral Joint Exercise

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



Joint Amphibious Operation Exercise

Continuous Projection Exercises Concept (CPEC)
Improve deterrence and response capability by deploying highly proficient GSDF units to Southwest region and conducting training.



Amphibious Rapid Deployment Units **C**ontinuous **P**rojection **E**xercises **C**oncept : **CPEC**

Training and Exercises for enhancing Continuous Projection Exercises Concept

- Maneuver, Deployment and Field Training in Remote Islands by Rapid Deployment Division and Brigade
 - Improve readiness and capability for response by deploying rapid deployment division and brigade to conduct field training suitable for the characteristic of the area.
- Field Exercise by Amphibious Rapid Deployment Brigade in Remote Islands and Deployment on Water in Southwest Region in Collaboration with Vessels
 - Make efforts to further enhance capability if Amphibious Rapid Deployment Brigade to effectively respond to various situations such as attacks to remote islands.
- Rapid Deployment Training in Fine Domestic /Overseas Training Environment including Hokkaido, the U.S and Australia
 - Enhances bilateral response capabilities with the U.S. and others through exercises aimed at improving tactical skills and interoperability necessary for operations for response to various situations.



Maneuver Exercise by MSDF vessel



Maneuver Exercise on the water in Southwest region.



Field Exercise with the U.S Force Oversea

3 Strengthening Sustainability and Resiliency

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

(1) Securing Continuous Operations

- Procurement of Anti-air missiles that contributes to air superiority and provides effective response to threats as well as torpedoes needed to secure underwater superiority (¥19.8billion)
- Procurement of aerial refueling and transport aircraft(KC-46A) (repost)

- Site Acquisition in Order to Expand Logistic Capability in Yokosuka Base
Acquire site in Arai area for logistics support and proceed with expanding logistics capability in Yokosuka base.

- Procurement of New Rifles (3,283 units:¥900million)
Procure new rifles with better environment durability, fire power and extensibility as successor of current rifles



New Rifle

- Procurement of New Pistols (323 units:¥20million)
As successor of current pistols, procure new pistols which are easier to handle.



New Pistol

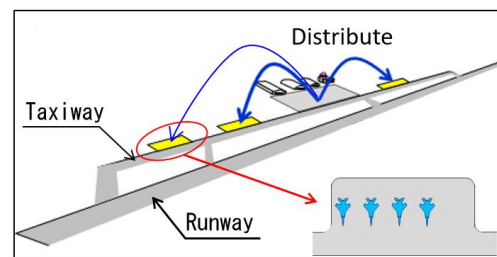
- Procurement of Counter Drone System for Security (※)
Based on amendment to the Act on Prohibition of Flight of UASs around and over Key Facilities ensure security around camps and bases of the SDF by strengthening posture for response to drones.

- Integration of Administrative Systems (¥3.7billion)
Integrate various administrative system to enable commanders in each level to process/share general and targeted information in real-time and enhance the basis for communication and command(C2).



Integration of Administrative Systems (conceptual image)

- Development for Dispersion Pads (※)
Development for dispersion pads at air bases for enhancing resiliency.



Dispersion Pads

- Procurement of Equipment Necessary to Improve the Capabilities to Restore Damaged Runways (¥600million)
 - Procure equipment which enables a faster restoration of damaged runways of airbase (ASDF)
 - Procure field equipment to support restoration for runways of maritime/air SDF in addition to restore damage to airfield of GSDF.(GSDF)



Equipment to Restore Damage in Runways

- Upgrade including Seismic Resistance of Aging SDF Facilities (¥59.3billion)
 Ensure the SDF's stable operational readiness by renovating SDF facilities such as office buildings and barracks, which undermine operations of the SDF.



Air-conditioning facility

(2) Ensuring Operational Availability of Equipment

- Ensure Necessary Cost for Maintenance of Equipment (¥965.6billion)
- Reduction in Procurement Lead Time through the Use of PBL (Performance Based Logistics) Contracts

Realize a timely supply of parts through PBL contracts, in which contract procedures are no longer required for every procurement, and estimating demands and controlling inventory that are left at the discretion of suppliers, while also taking advantage of global supply chains.



MCH-101 helicopter(MSDF)

- PBL contract for repairing and other services for minesweeping and transport helicopter(MCH-101) (¥19.4billion)

III Priorities in Strengthening Core Elements of Defense Capability

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

1 Reinforcing Human Resource Base

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

Enhancement of Recruitment Programs

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



Recruitment advertising videos

Enhancement of Re-employment Support Programs

- Introduction of new Vocational Training Subjects (¥2million)
Establish new subjects to get qualifications such as project-sustainability manager to expand opportunity to be re-employed to crisis-management sector in private companies and other employers.
- Internship Program as a part of Re-employment Support Measure (¥10 million)
Provide internship program for the SDF personnel who are retiring in order to prevent mismatching of re-employment that leads to quitting a job in early timing as well as to expand the opportunity of re-employment.



Internship program
(Image: hospitality field)

Others

- Promotion of Measures to Prevent Power Harassment (¥10million)
 - Program to develop leadership skills (tentative name) by experts from outside the ministry
 - Establish a consultation desk by third party regarding harassment

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

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

Female SDF Personnel in Action



First female commander of GSDF signal group



First female captain of minesweeping vessel



Personnel conducting air control

Improvement of the Working Environment for Female SDF Personnel(2.7billion)

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

Improvement of Section for Female Personnel



Image after the Renovation



Improvement of Section for Female Personnel (Turning men's lavatory into women's)

Image after the Renovation

- Improvement of Sections for Female Personnel on Ships (MSDF)
- Development of Training for Mentors
- Invite Outside Counselors for Female SDF Personnel, etc.

Improvement of Working Environment for Working Style Reform (¥30million)

- Improvement of Working Environment to Realize a better Workplace



Support for Work-Life Balance (¥400million)

- Improvement of Workplace Nurseries
Promote workplace nurseries suitable for working patterns particular to the SDF so that personnel raising children can engage in their duties without concerns.
 - Improvement of workplace nursery (National Defense Medical College).
 - Provision of supplies in workplace nurseries.
- Provision of Supplies for temporary Child-care Service in case of Emergency Operations.
 - Provide supplies (safety mats, baby beds, etc.) for temporary child-care service in case of emergency operations.
 - Implement temporary child-care service drills, preparing for emergency operations.
 - Participate in courses designed to improve child-care skills for temporary child-care service in case of emergency operations.



Workplace Nurseries
(conceptual image)



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

Promotion of Female Personnel Engagement in International Cooperation, etc.

- Dispatch Personnel to NATO Gender-related Annual Meetings
Dispatch female SDF personnel to the gender-related annual meetings and other occasion hosted by NATO for developing personnel and to bring in perspective of gender in international peace cooperation activities 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.

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

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

- Hold Seminars on Mentality Reform, etc.
- Collective Trainings for Promoting Gender Equality, etc.
- Creation and Distribution of Pamphlets featuring Roles Played by Female Personnel and Support for Work-life Balance, etc.



A Scene of the Collective Training

Others (¥80 million)

- Recruitment of Female SDF Personnel
Create brochures targeting female recruits
- Promote Measures to Prevent Sexual Harassment

Improvement of Living and Working Environment

- For SDF personnel to fulfill their missions with high morale, procure of fixtures, daily necessities, etc. and improve facilities to improve living and working environment.
 - Improve facility (except housings) (¥36billion)
 - Improve housing (¥20.3billion)
 - Secure fixtures (¥1.4billion)
 - Secure daily necessities, etc. (¥1.1billion)



Upgrade Air-Conditioning facility



(3) Enhancement of Educational and Research System

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

National Institute for Defense Studies

- Promoting international academic exchange through mutual dispatching of researchers and conducting joint researches by newly established short-term fellowship with French Military Institution of Strategic Research (IRSEM)



Reference: Visit by Chief of IRSEM
(L'institute de recherche strategique /
'ecole militaire)(31.3.4)

The National Defense Academy

- Development of the Education and Research System (¥300million)
Develop educational experimental equipment to adapt to advances in the field of science and technology and to the expansion of the educational research field.

The National Defense Medical College

- Improving Management of the National Defense Medical College
Conduct basic study to improve a central clinical facilities as a regional medical hub and clinical education site in order to secure necessary amount of medical cases in terms of quality and quantity for education and research (¥50million)
- Enhancement of Research Function Related to Defense Medicine
 - Conduct advanced research on defense medicine which contributes to the operation of SDF units and the education at the National Defense Medical College (¥300million)

(4) Promotion of effort related to SDF Reserve Personnel and others who support sustainable unit operation

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

- Establish “Subsidy to the companies that cooperate in developing SDF Ready Reserve Personnel” (tentative name) (¥70million)
SDF Reserve Personnel with no experience as SDF personnel need to join the training (approx.40days/3years) to acquire necessary knowledge and skills to be Ready Reserve Personnel. As they have to be away from their work for many days for this reason, this subsidy (¥560 thousand/person) aims to gain understanding and cooperation from the employers.
- Development of Uniforms, Accessories and Others (¥110million)
In order to improve the effectiveness of SDF Reserve Personnel, implement developments in uniforms, accessories, as well as containers and shelves to store those.

(5) Enhancement of Medical Function

In order to respond to various situations, SDF will strive to enhance medical function in view of joint operation such as frontline first aid capabilities, the capacity to conduct Damage Control Surgery (DCS) at field medical facilities to stabilize the symptoms of patients, and the patient management capabilities during medical evacuation in order to strengthen the medical care system to seamlessly cover the entire stretch from the frontline to final medical evacuation facilities. Moreover, SDF will establish an efficient and high-quality medical care structure through further endeavors including upgrade of SDF hospitals into medical hubs with enhanced functions. Further, SDF will improve training and educational foundation to enhance capability of combat injury treatment, and improve posture for international cooperation.

- Strengthen Posture of seamless Medical Care and Evacuation from Frontline to the final Medical Evacuation Destination
 - Procure equipment required for Damage Control Surgery (DCS) and post-surgery patient management (¥400million)
 - Procure necessary equipment and supply for managing patient during medical evacuation (¥10million)
 - Procurement of equipment for blood preservation (¥1million)
 - Procurement in keeping with change in specification of individual first-aid kit (¥200million)



Field Surgical System (for divisions and brigades)
(left: outside right: inside)



Example of Equipment for DCS



Change to specification of Personal first-aid kit



Folding stretcher

- Initiatives toward Upgrading SDF Hospitals to Hubs with Enhanced Functions
 - Steadily promote improvement of a core hospital in each district and hospitals with special functions, including submarine medicine and aviation medicine.
 - Construction of the building of SDF Iruma Hospital (tentative name) in line with the consolidation of SDF hospitals (¥5.2billion)
 - Soil pollution survey for reconstruction of SDF Fukuoka Hospital (¥10million)
 - Basic design for reconstruction of SDF Yokosuka Hospital (¥100million)
- Improvement of Education, Training and their Foundation to Respond to Combat Injury
 - Conceptual design for developing training system for aviation medicine (¥60million)
 - Procure educational materials for training to improve first-aid skill (¥100million)
 - Develop personnel for DCS teams (¥20million)



Image of training for aviation medicine



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



Improving skill of DCS (DCS team)

- Enhance Capabilities to Respond to Infectious Disease which can be International Threats
 - Development of posture to secure the ability to transfer patients with infectious disease (related training, securing related medical supply etc.) (¥100million)
 - Training & education of infectious disease experts of JSDF doctors, etc. (¥4million)
 - Strengthen posture of prevention for severe infectious disease (¥200million)



Image of Response to Infectious Disease



(Portable Patient Monitoring Device)



(Syringe)

Examples of necessary medical equipment for long-distance transfer of patient with infectious disease.

(6) Increase the number of Defense Officials

Increase the number of defense officials who are also SDF personnel in order to improve structure to execute what NDPG and MTDP stipulates given the fact that Prime Minister decision which directs personnel expense and organization and quota of staff change request in each fiscal year (Directive for Organization and allocation of personnel expense in JFY2020 to proceed with core issue of the cabinet office, July 31st, 2019.) include development of security arrangement. Realized net increase of defense officials for the first time since 1980 by having the increment outweighing rationalization of organizational quota.

Strengthen necessary capability for cross-domain operation (85 personnel)

- Increase the number of defense officials to improve project planning capability, developing personnel and information collection/analysis in new domains of space, cyberspace and electromagnetic spectrum
- Increase the number of defense officials to develop equipment to strengthen capabilities in maritime and air domains and comprehensive missile and air defense capability.



Defense Official engaging in Cyber Security work (conceptual image)

Improve security cooperation, strengthen Japan-US alliance (56 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-US defense cooperation in new domains
- Increase the number of defense officials to promote the projects to mitigate the impact on local communities such as relocation related to the return of land areas south of Kadena Air Base and improvement of facility for contingency use of Tsuiki/Nyutabaru AB.



Defense official supporting the Minister of Defense in defense cooperation and communication with other countries (conceptual image)

Strengthen organization to cope with shrinking and aging population with declining birth rates (54 personnel)

- Increase the number of defense officials to secure talented human resource within severe recruiting environment
- Increase the number of defense officials to conduct improvement of facility such as refurbish or reconstructing of aged barracks to enable SDF personnel to fulfill their missions with high morale and pride.



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

Increase the number of defense officials to build truly effective defense force (82 personnel)

- Increase the number of defense officials to support cross-domain operations, by measures such as enforcement of technology base, intelligence capabilities, efforts to conduct effective training and exercise, improvement of medical functions and collaboration with local community

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

< Reference : Changes in the number of defense officials >

(unit: person)

| | JFY2015 | JFY2016 | JFY2017 | JFY2018 | JFY2019 | JFY2020 |
|--|---|---------|---------|---------|---------|---------------------------|
| | The 13 th rationalization plan | | | | | The 14 th plan |
| Rationalization | △261 | △262 | △262 | △261 | △261 | △266 |
| Increase | 164 | 169 | 182 | 209 | 204 | 299 |
| Net Increase and decrease | △97 | △93 | △80 | △52 | △57 | 33 |
| Decrease due to the arrival of temporary post's deadline, etc. | △20 | △7 | △7 | △15 | △12 | △12 |
| Number at the end of FY | 21, 161 | 21, 061 | 20, 974 | 20, 931 | 20, 903 | 20, 924 |

*Do not include special component of organizational quota for promoting employment of persons with disabilities, etc.



2 Reinforcing Technology base

(1) Reinforcing 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 or cutting-edge, game-changing technology such as AI.

Priority investment for future-promising technology field

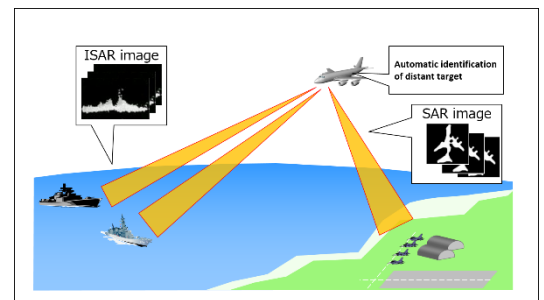
Promote core research under Mid-long term technology estimation (published Aug.2016, currently under revise), Specifically, conduct following efforts stipulated in Research and Development vision (published Aug.2019).

Effort in electromagnetic domain

- Research on Technology to Support Electromagnetic Spectrum Management by Visualizing the Usage of Electromagnetic Spectrum Resources (repost)
- Study on Protection Measure Against EMP Threat (¥200million)
Evaluate the effectiveness of electromagnetic protection measure in a level of element or circuit which configure electronic devices by EMP emission device and formulate EMP protection guideline that are applicable to equipment commonly
*EMP: Electro-magnetic pulse

Effort for wide-area persistent surveillance including outer space

- Experimental Study for SAR/ISAR Image Identification Technology with Artificial Intelligence (¥800million)
In order to continuously conduct ISR activity in effective way, demonstrates the application of AI to radar image target identification
- Research about Infrared Sensing Element with high Sensitivity and Detection Range Broadband (repost)



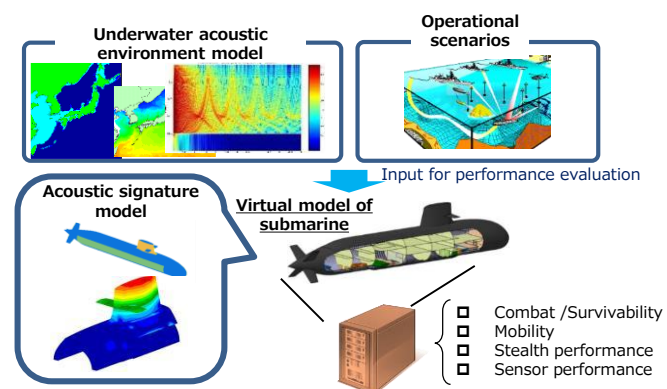
Experimental Study for SAR/ISAR Image Identification Technology with Artificial Intelligence (conceptual image)

Effort for Cyber Defense

- Study on Technology for Responding to Cyber Attack Targeting Intelligence Processing Capability within Equipment System (¥100million)

Effort for Underwater Defense

- Research on Comprehensive Capability Assessment Simulator for Future Submarine (¥2billion)
Conduct research on modeling and simulation technology which enables quantitative performance evaluation in various environments and operational scenarios



Research on comprehensive capability assessment simulator (conceptual image)

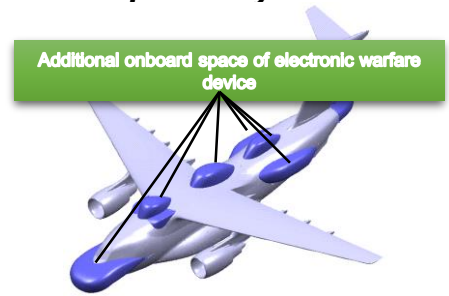
Effort for Stand-off Defense Capability

- Research on HVGP (Hyper Velocity Gliding Projectile) for Defense of Remote Islands (¥25billion)
Continue research on HVGP which glide in high speed and hit the target with high accuracy aiming for early practical use

Cutting down time required for research and development

Promoting effort for decreasing time and cost for research and development by stepwise development and other measures

- Development of Stand-off Electronic Warfare Aircraft (repost)
 Prompt application by stepwise development ,and formulate Open-architecture standard for shortening the lead time for development and decreasing the cost in future upgrades.



Reducing time for research and development in development of stand-off electronic warfare aircraft (conceptual image)

Promotion of Rapid Prototyping of Evolving Cutting-Edge Civilian Technologies

Promoting efforts for early operationalization of cutting-edge civilian technology ,and to discover and nurture innovative and emerging technology by utilizing the “Innovative Science & Technology Initiative for Security” program

- Effort for Early Operationalization of new Technology (¥800million)
 Make effort for early operationalization in three to five year timeframe by adapting industrial technology with early innovation cycle such as ICT by both engineer and operator in unified manner, and also pursue reduction of price of equipment and cost for sustainment by utilizing the result of this effort also in the market.

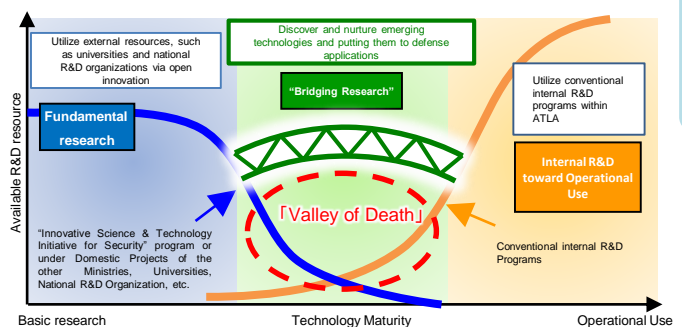


Example of effort for early operationalization for cutting-edge civilian technology with fast advancement, (VR system for maintenance of aircraft)

*VR: Virtual Reality

- Discovering and Fostering Innovative and Emerging Technology (¥10.1billion)

- Continually promote the “Innovative Science & Technology Initiative for Security” program regarding basic research on advanced civilian technologies.
- Conduct “Bridging Research” for leading Emerging Technologies in Basic Research into Defense Applications.
- Efforts of utilization or establishment of think-tank which research and analyze the trend of cutting-edge technology in and out of Japan.



Conceptual image of bridging research

(2) Promotion of 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 of effectiveness and flexibility of project management through lifecycle of equipment

- Strengthening Posture to Improve Effectiveness and Flexibility of Project Management including Expansion of Targeted Items for Project Management.
 - Transfer supervising function over project management from Joint Systems Division to Project Planning Division in order to unify the presiding function related to project management(transferring the scope of authority)
 - Newly establish "Project Management Division (Guiding Weapon and Joint Systems) (tentative name)"and abolish Joint Systems Division in order to concentrate on management of guided weapons and joint systems designated as project management target items, which are on the rise.

Rationalization of FMS procurement

- Strengthening Posture of FMS-related Division within ATLA
Establish "FMS coordination section(tentative name)" which plans FMS policy in the US within Procurement Planning Division and study and make effort for more effective and efficient operation of FMS.
- Dispatching Personnel from ATLA to US Think-tank
Conduct research and study about FMS-related effort of the customer countries to rationalize FMS procurement (¥10million)

Streamlining Sustainment of Equipment

- Reduction in Procurement Lead Time through the Use of PBL (Performance Based Logistics) Contracts

Realize a timely supply of parts through PBL contracts, in which contract procedures are no longer required for every procurement, and estimating demands and controlling inventory that are left at the discretion of suppliers, while also taking advantage of global supply chains.



Minesweeping and transport helicopter of MSDF(MCH-101)

- PBL contract for repairing and other service for minesweeping and transport helicopter of MSDF (MCH-101) (repost)



(3) Strengthening Defense Industrial Base

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

Support for Strengthening Defense Industrial Base

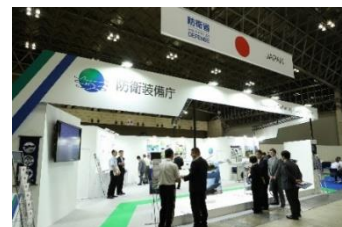
- International survey on participation of domestic companies in maintenance program of imported equipment
Conduct survey on situations of foreign countries regarding how their domestic companies participate in the maintenance program of imported equipment (¥30million)
- Study on measure to support companies for strengthening defense industrial base
Conduct survey to study on measure to support the companies' effort for strengthening defense industrial base (¥20million)

Strengthening Supply Chain

- Build a constant monitoring on supply chain
Grasping risk information of companies which make up defense supply chain to cope with the risk of bankruptcy or withdrawal of those companies based on the information acquired by supply chain (¥10million)
- Discovering and utilizing the innovative technology and SME's technology
 - Discover small and medium sized enterprises which possess superior technologies and products through exhibitions to match them and the SDF/MOD or defense primary corporations.(¥10million)
 - Evaluate the possibility of innovative technology such as 3D printer or AI to be adapted to defense equipment (¥80million).

Promoting Appropriate Overseas Transfers of Defense Equipment

- Accelerate efforts related to defense equipment and technology cooperation to promote overseas transfers of defense equipment
 - Conduct feasibility study on possible defense equipment and technology cooperation projects (¥100million)
 - Participation in international defense equipment exhibitions
Disseminate defense equipment developed in Japan and superior technology possessed by small and medium-sized Japanese enterprises(¥200million)



ATLA's booth at MAST ASIA 2019

- Enhancing posture with security of information and technology
Establish "Equipment Security Management Division (tentative name)" in Department of Equipment Policy of ATLA which specializes in security of information and technology in order to promote the policy to enhance information security within Japan's defense industry and to prevent leakage of advantageous technologies on the occasion of overseas transfer of defense equipment.



3 Enhancing Intelligence Capabilities

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

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

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

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



IV Response to Large-Scale Disasters

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

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

- Promotion of Seismic Retrofitting and Tsunami Defense Measures to Maintain and Enhance Functions in Preparation for the Event of a Disaster (¥20.2billion)
- Development of Disaster Response Hub Areas, etc. (Iruma) (¥1billion)

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

- SDF Joint Exercise for Rescue (JXR: Joint Exercise for Rescue)
Implement the SDF Joint Exercise for Rescue to maintain and improve the SDF's joint operation capabilities to respond to large-scale domestic disasters, in order to minimize damage through smooth and effective responses in the event of large-scale domestic disasters.
- 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: Remote Island Disaster Exercise)
Implement drills to maintain and enhance capabilities to ensure smooth joint disaster response operations against sudden disasters caused by large-scale disasters on remote islands.



SDF Joint Exercise for Rescue (JXR)



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



Remote Island Disaster Relief Exercise (RIDEX)

3 Procurement of Equipment Contributing to Disaster Response

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



Type-07 Mobility Support Bridge (disaster management exercise)

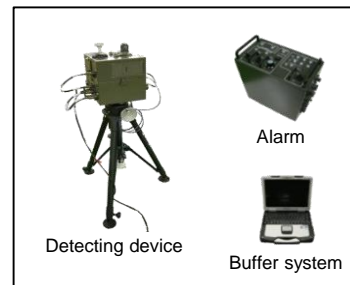
- Readiness for Unconventional Disaster
 - Procurement of decontamination set (decontamination vehicle) (1 vehicle: ¥100million)
 - Procurement of Type-18 personal protective equipment (8,000 set:¥2billion)
 - Procurement of NBC alarms (1 set:¥300million)



Decontamination Set (decontamination vehicle)



Type-18 personal protective equipment



NBC alarms

- Procurement of Rescue Helicopter (UH-60J) (repost)
- Procurement of Transport Helicopter (CH-47JA) (repost)

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

- Emergency measures for the SDF's assets related to disaster prevention and facilities.(¥50.8 billion)
*Expenditure based

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



Procurement of lifesaving floating boat (conceptual image)



Maintenance of medium-sized dozer (conceptual image)

- Since facilities with risks against prosecution of swift and appropriate missions are identified, conduct aseismic construction and upgrade of aging facilities, and procure private power generator (improve power supply capability)



Strengthen building structure by external reinforcing method and buildup of inner wall (conceptual image)



*Based on "three -year emergency measures for disaster prevention/mitigation and building national resilience" (approved by cabinet on Dec.14th 2018) , improve facility to keep/enhance functions of SDF camps, etc. and secure necessary equipment or supplies for rescue operation intensively in three years in order to prepare for every disasters. JFY2020 marks the end of this three-year program. Projects related to these measures requires utilization of extraordinary/special measures. Therefore, the projects will be conducted separately from building of defense capability based on the MTDP.

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

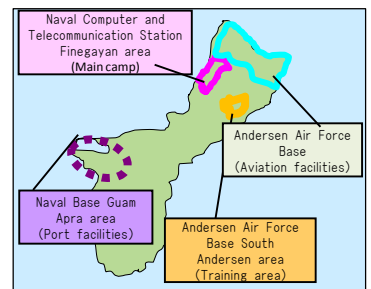
While maintaining the deterrence of U.S. Forces, Japan will steadily implement specific measures, including the realignment of U.S. Forces in Japan, to mitigate the impact on local communities such as those in Okinawa.

¥263.8billion

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

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 (¥41billion)
Development of Bachelor Enlisted Quarters buildings, etc. (Finegayan Area)



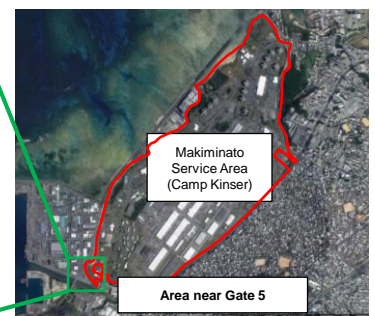
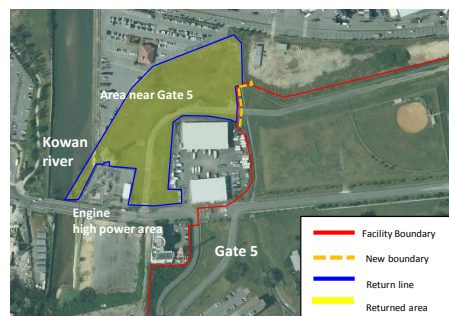
Guam

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

- Project for the Realignment in Okinawa (¥164.8billion)
 - Relocation of MCAS Futenma (¥84billion)
 - Return of land areas South of Kadena Air Base(¥80.8billion)
- Project for Relocation of the Carrier-based Aircraft (¥500million)
- Project for Contingency Use (¥4.6billion)
- Project for Training Relocation (¥9.1billion)
- Project Intended to Facilitate Smooth Implementation of Realignment-related Measures (¥43.7billion)



MCAS Futenma



The Return of Area near Gate 5 on Makiminato Service Area (Camp Kinser) on 31st March 2019

2 SACO-Related Expenses

¥15.2billion

- 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

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

(1) Expenses Related to Programs for Communities Around Bases

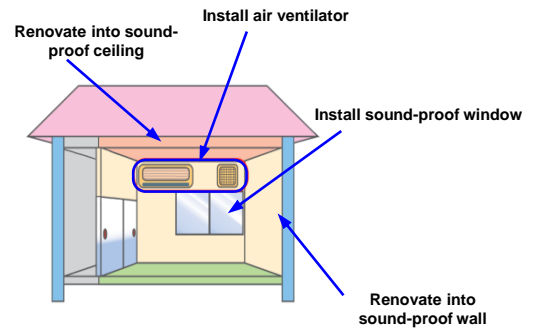
¥114.7billion

Including:

- Residential sound proofing: ¥50.9billion
- Improvement of living environment of neighboring communities: ¥63.8billion

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

[Example of Residential Sound Proofing]



Sand Control Dam

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

¥200.5billion

Including:

- Special Measures Agreement : ¥152billion
- Facilities Improvement Program : ¥21.9billion
- USFJ employee measures, etc. : ¥26.6billion

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



Barracks

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

¥152.7billion

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

VI Strengthening Security Cooperation

Japan will actively leverage its defense capability to work on defense cooperation and exchanges which include joint training and exercises, defense equipment and technology cooperation, capacity building assistance and interchanges among military branches to strategically promote multi-faceted and multi-layered security cooperation, based on the concept 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 ASEAN as a whole
Implement capacity building initiatives concerning humanitarian assistance/disaster relief(HA/DR) and maritime security, while also promoting shared understanding of international norms.
- Promotion of capacity building in the Indo-Pacific Region
 - Implement programs to improve capabilities of military personnel in Southeast Asia in the fields such as HA/DR and PKO.
 - Implement capacity building programs related to the fields such as maritime security in South Asia and Pacific island countries.
 - Capacity building initiative in collaboration with partners such as the U.S and Australia.



Japan-ASEAN HA/DR invitation Program



Field Training HA/DR field

Promotion of Defense Cooperation and Exchanges

- Initiatives under the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus)
Proactive facilitation of the enhancement of regional defense and security cooperation through the ADMM-Plus, which is the only official meeting of defense ministers of the whole Indo-Pacific region which includes Japan.



ADMM-Plus

- Initiatives under the “Vientiane Vision 2.0”
Promotion of practical defense cooperation focused on ensuring "the rule of law" and strengthening maritime security under the purpose of contributing to the centrality, unity and resilience of ASEAN based on the updated vision, which is the guidelines for Japan-ASEAN defense cooperation.



Professional Airmanship Program

- Participation to Pacific Partnership
strengthening of partnerships among participating countries by visiting countries in the Indo-Pacific region to provide medical services and conduct cultural exchanges and facilitation of international peace cooperation operations through cooperation with governments, militaries, international organizations and NGOs.



Pacific Partnership

- Indo-Pacific Deployment (IPD) 2020
Contribute to regional peace and stability by improving tactical skill of the MSDF and promoting connection with navies from other countries through conducting bilateral/multilateral training with navies from Indo-Pacific Region.
- Humanitarian Assistance/Disaster Relief
Joint Exercise in Micronesia (Christmas Drop)
Jointly working with the U.S. and Australia to improve the airdrop capabilities and to reinforce partnerships in order to conduct swift and effective assistance operations in flooded areas or sea areas in the event of a large-scale disaster including flood or a tsunami.
- Field Exercise with Indian Army in India (Dharma Guardian)
Dispatching units of GSDF to India to strengthen cooperative relationship between Japan and Indian Army as well as to improve tactical skills of GSDF on counter-terrorism.



Indo-Pacific Deployment (IPD)



Christmas Drop



Dharma-Guradian

2 Appropriately Respond to Improve Global Security Challenges

Enhancement of Capability to Conduct Overseas Activities

- Participate in multilateral exercises (Khaan Quest)
Dispatching GSDF units to multilateral exercise in Mongolia to improve its capability necessary for PKO activities and multinational interoperability among nations.
- Participate in multilateral Training/Exercises
The GSDF,MSDF and ASDF participate in multilateral training/exercises such as Cobra Gold to improve capability for Rescue of Japanese Nationals Overseas.



Khaan Quest



Cobra Gold

International Cooperation with UN and Partners in the Areas of Strength

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



Lecture by Japanese instructor

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



Instruction Concerning the Operation of Engineering Equipment For the Djibouti forces

- UN project for Rapid Deployment of Enabling Capabilities
Contribute to Rapid Deployment of U.N. PKO Engineering units by dispatching SDF personnel and providing education to engineers from African and Asian countries with regard to the operation of heavy machinery.



UN project for Rapid Deployment of Enabling Capability

Ensuring Maritime Security

- Counter-piracy Operations off the Coast of Somalia and in the Gulf of Aden
 - Continue counter-piracy operations by destroyers and P3Cs off the Coast of Somalia and in the Gulf of Aden.
 - Carry out activities in Combined Task Force 151 (CTF151), a multinational counter-piracy task force.
 - Conduct air transportation using KC-767 and other aircraft as necessary.



A Destroyer Escorting Commercial Vessels

VII Streamlining Initiatives

- Organization and Equipment Optimization Project-

Based on the NDPG and MTDP which were approved Dec.2018, various initiatives to further streamline and rationalize defense force development have been promoted, resulting in reduced costs of approximately ¥431.3 billion.

1 Organization and Human Resource Optimization

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 Review of Projects [Expected reduction:¥192.2billion]

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

- Diversion of parts from decommissioned Patrol Helicopters (SH-60J) to equipment.
- Review of the quantity of engine modification for transport helicopters (CH-47J) [Expected reduction:¥2billion]

3 Standardization and Optimization of the Equipment Specifications

[Expected reduction:¥83.9billion]

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.

(Example)

- Multi-purpose surveillance radar: Develop a new radar to integrate conventional four-type radars into one [Expected reduction¥26.2billion]

4 Bulk and Joint Procurement [Expected reduction:¥32.4billion]

Pursue cost reduction by bulk purchase of equipment and joint procurement of equipment components commonly used across all SDF services.

(Examples)

- Joint procurement of patrol helicopters (SH-60K) and rescue helicopters (UH-60J) , total of 10 helicopters [Expected reduction¥6.8billion]
- Four aerial refueling/ transport aircraft (KC-46A) [Expected reduction ¥12billion]
- Three transport helicopters (CH-47JA) [Expected reduction ¥3.4billion]

5 Procurement of Equipment and Services Using Long-Term Contracts

[Expected reduction:¥5.3billion]

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

(Examples)

- Package contract for repairing components of fighters (F-15) (seven-year contract) [Expected reduction ¥5.3billion]

6 Cost Scrutiny, etc. [Expected reduction:¥117.6billion]

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

7 Securing of Revenue

Secure revenue such as income from SDF hospitals, compensation for the use of national property, and proceeds from sales of no-longer used goods.

VIII Others

1 Restructuring and Organizational Quota Changes

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

- Establish "Space Operations Squadron(tentative name)" (repost)
- Establish "Cyber Protection Unit" in GSDF (tentative name)" (repost)
- Establish newly an Electronic Warfare Unit (repost)
- Request for Increase in the Number of SDF Personnel
 - Improve the readiness to quickly respond to various situations by increasing the number of uniformed SDF personnel to develop and reinforce the defense postures in the southwestern region as well as in its surrounding sea and airspace, while also improving the response capability in new domains.
 - In order to further improve posture in new domains, transfer personnel from GSDF to JSO to make the best out of limited human resources.

| category | GSDF | MSDF | ASDF | Joint Staff and others | Total |
|--------------------------|---------|---------|---------|------------------------|---------|
| Improve sufficiency rate | + 2 2 7 | + 1 9 9 | + 2 1 5 | 0 | + 6 4 1 |
| Transfer | △ 6 3 | △ 1 3 | △ 1 3 | + 8 9 | |
| Total | + 1 6 4 | + 1 8 6 | + 2 0 2 | + 8 9 | |

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

- Organizational Quota Changes
 - Based on the concept of "Free and Open Indo-Pacific", for the purpose of strategically promote multi-layered and multi-faceted security cooperation, establish another director-level position named "Councilor (Director) (tentative name)" in the Bureau of Defense Policy in order to execute expanding defense cooperation and exchanges in swift and accurate manner, and to execute security cooperation with other countries under the sustainable manner.
- Establish "Fighter (F-X) Development Division (tentative name)" in ATLA to effectively implement F-X development. (Repost)
- Establish "Equipment Security Management Division (tentative name)" in Department of Equipment Policy of ATLA which specializes in security of information and technology in order to promote the policy to enhance information security within Japan's defense industry and to prevent leakage of advantageous technologies when on the occasion of overseas transfer of defense equipment.(repost)
- Transfer supervising function over project management execution from Joint Systems Division to Project Planning Division of the Department of Project Management of ATLA in order to unify the presiding function related to project management (transferring the scope of authority). Also newly establish "Project Management Division (Guided Weapons and Joint Systems) (tentative name)" and abolish Joint Systems Division, in order to concentrate on management of guided weapons and joint systems designated as project management targeted items, which are on the rise. (repost)



Shangri-La Dialogue (June,2019)

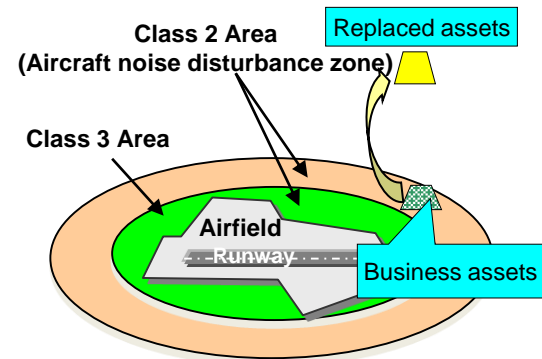
2 Initiatives to Ensure Appropriate Management of Administrative Documents

- Dispatch personnel in charge of management of documents to SDF units and organizations and check / give advice on management of documents.
- Improve the posture to execute information disclosure to the public in appropriate and effective manner.

3 Tax Reform Request

- Extension of Special Measures such as Making a Replacement Purchase of Business Assets Related to Aircraft Noise Reduction (Relocation) Measures [Income Tax, Corporation Tax]

Three-year extension of special measures for taxation to transfer income in case of transferring business assets located within the aircraft noise disturbance zones around defense facilities to the government and making a replacement purchase of those assets to locate outside the aircraft noise disturbance zones will be applied to the JMOD.



*Replacement of business assets
(Conceptual Image)*

- Expansion of Tax Exemption Measures for the case of Provision of Tax-Exempt Light Oil based on ACSA [Light Oil Delivery Tax]

When the JMOD acquires light oil for the engines of their vessels, Light Oil Delivery Tax is exempted. On the other hand, in case of transferring the tax-exempt light oil to a third party, Light Oil Delivery Tax is imposed to the JMOD (deemed-taxation).

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



*Providing light oil to a
foreign military vessel at sea
(Conceptual Image)*

Major Equipment

1 Major Equipment

| Procurement type | | JFY2019 Number Procured | JFY2020 | | | |
|--|--|--|-------------------------|-------------------------|----------|-----|
| | | | Number procured | Amount(¥100 million) | | |
| Aircraft | GSDF | New Utility Helicopter(UH-X) | 6 | — | — | |
| | | Transport Helicopter(CH-47JA) | — | 3 | 228 | |
| | MSDF | Fixed-wing patrol aircraft(P-1) | — | 3 | 632(395) | |
| | | Life extension of fixed-wing patrol aircraft(P-3C) | (5) | (7) | 34 | |
| | | Patrol Helicopter(SH-60K) | — | 7 | 498(76) | |
| | | Life extension of patrol helicopter(SH-60K) | (3) | (3) | 72 | |
| | | Life extension of patrol helicopter(SH-60J) | (2) | (2) | 18 | |
| | | Life extension of imagery intelligence gathering aircraft(OP-3C) | — | (1) | 4 | |
| | | Life extension of signal reconnaissance aircraft(EP-3) | — | — | 2 | |
| | | ASDF | Fighter aircraft(F-35A) | 6 | 3 | 281 |
| | Fighter aircraft(F-35B) | | — | 6 | 793 | |
| | Improvement in air-to-air combat capability of fighter aircraft (F-2) | | Upgrade | (—) | (—) | — |
| | | | Parts | (7) | (—) | — |
| | Improvement of capability of fighter aircraft(F-2) | | (—) | (2) | 1 (26) | |
| | Improvement of capability of fighter aircraft(F-15) | | (2) | — | 390 | |
| | Transport aircraft(C-2) | | 2 | — | 220 | |
| | Airborne early-warning aircraft(E-2D) | | 9 | — | 380 | |
| | Improvement of capability of airborne early warning and control systems(E-767) | | Upgrade | (1) | (—) | 0 |
| | | | Parts | (—) | (—) | 0 |
| | Aerial refueling and transport aircraft(KC-46A) | | — | 4 | 1,052 | |
| Rescue helicopter(UH-60J) | — | | 3 | 156 (16) | | |
| Unmanned aerial vehicle(RQ-4B Global Hawk) | 1 | — | — | | | |
| Vessel | MSDF | Destroyer | 2 | 2 | 944 | |
| | | Submarine | 1 | 1 | 702 | |
| | | Mine sweeping vessel | — | 1 | 126 | |
| | | Life extension of Asagiri-class destroyer | Work | (2) | (3) | 1 |
| | | | Parts | (1) | (1) | 1 |
| | | Life extension of Abukuma-class destroyer | Work | (1) | (3) | 1 |
| | | | Parts | (—) | (—) | 1 |
| | | Life extension of Kongo-class destroyer | Work | (—) | (1) | 42 |
| | | | Parts | (2) | (2) | 42 |
| | | Life extension of Murasame-class destroyer | Work | (—) | (—) | 39 |
| | | | Parts | (1) | (2) | 39 |
| | | Life extension of Oyashio-class submarine | Work | (4) | (3) | 24 |
| | | | Parts | (3) | (5) | 24 |
| | | Life extension of Soryu-class submarine | Work | (—) | (—) | 1 |
| | | | Parts | (—) | (2) | 1 |
| | | Life extension of Hibiki-class ocean surveillance ship | Work | (—) | (1) | 7 |
| Parts | (2) | | (1) | 7 | | |
| Life extension of Towada-class fast combat support ship | Work | (1) | (1) | 2 | | |
| | Parts | (1) | (—) | 2 | | |
| Modernization of destroyer CIWS (high-performance 20mm autocannon) | Work | (5) | (1) | 0.1 | | |
| | Parts | (4) | (—) | 0.1 | | |

| procurement type | | | | JFY2019 Number procured | JFY2020 | |
|---|-------|---|-------|-------------------------------|--------------------|--------------------------|
| | | | | | Number procured | Amount (¥100 million) |
| Vessel | MSDF | Modernization of command system of Asagiri-class destroyer | Work | (2) | (3) | 13 |
| | | | Parts | (-) | (-) | |
| | | Modernization of command system of Takanami-class destroyer | Work | (-) | (-) | 7 |
| | | | Parts | (-) | (2) | |
| | | Update of computers in command system of Murasame-class destroyer | Work | (2) | (-) | 38 |
| | | | Parts | (-) | (4) | |
| | | Update of computers in command system of Akizuki-class destroyer | Work | (-) | (-) | 36 |
| | | | Parts | (1) | (2) | |
| | | Update of computers in command system of Hyuga-class destroyer | Work | (1) | (-) | 19 |
| | | | Parts | (-) | (1) | |
| Update of computers in command system of Izumo-class destroyer | Work | (1) | (-) | 8 | | |
| | Parts | (-) | (1) | | | |
| Modernization of computers in command system of Oyashio-class submarine | Work | (1) | (-) | - | | |
| | Parts | (-) | (-) | | | |
| Improvement in capability of Osumi-class LST | Work | (-) | (-) | 3 | | |
| | Parts | (-) | (1) | | | |
| Upgrade of submarine rescue ship Chihaya | Work | (-) | (1) | 7 | | |
| | Parts | (1) | (-) | | | |
| Missile | GSDF | Type-03 middle-range surface-to-air missile (modified) | | 1 company | 1 company | 120 |
| Firearm, vehicle, etc. | GSDF | New Rifle | | - | 3,283 | 9 (1) |
| | | New Pistol | | - | 323 | 0.2 |
| | | Anti-personnel sniper rifle | | 6 | 8 | 0.3 |
| | | 60mm mortar (B) | | 6 | 6 | 0.2 |
| | | 120mm mortar RT | | 12 | 6 | 3 |
| | | Type-19 150mmself-propelled howitzer | | 7 | 7 | 45 |
| | | Type-10 tank | | 6 | 12 | 156 |
| | | Type-16 mobile combat vehicle | | 22 | 33 | 237 |
| | | Vehicle, communications equipment, facility equipment, etc. | | ¥34.4billion | - | 493 |
| BMD | GSDF | Land-based Aegis system (Aegis Ashore) | | 2 | - | - |
| | MSDF | Improvement of capability of Aegis-equipped destroyers | | 2 vessels | 2 vessels | 15 |
| | ASDF | Upgrade of Patriot system | | 12 | 8 | 90 |

Note 1: The procurement amount for JFY2019 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 JFY2020. (The period for acquiring the item varies by equipment, but can take between two to five years.)

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

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

Note 6: The number of procurements in JFY2019 for the upgrade of the capability of Aegis-equipped destroyers represents the number of procurements for upgrading two Atago-class destroyers to be able to launch SM-3 Block IIA.

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

Note 8: The cost for upgrading of patriot system in JFY2020 include upgrade of 8 sets and a launch system.

2 Major Research and Development Programs

| Item | Overview | JFY2020 Amount (¥100 million) |
|--|---|-------------------------------|
| Development of ASM-3 (modified) | In order to cope with modernization of vessels in other countries, conduct upgrade program such as extending shooting range of Air-to-Ship missile with high survivability thanks to the technology to fly at hypersonic speed. | 103 |
| Research on testing device for future amphibious technology | Make prototype of testing device for future amphibious vehicle and validate technology for coastal maneuver, faster navigation and safety of the crew. | 17 |
| Development of Stand-off electronic warfare aircraft | Development of the stand-off electronic warfare aircraft to support SDF air operation by conducting effective communication jamming. | 150 |
| Development of multi-purpose surveillance radar | Develop multi-purpose surveillance radar that can detect a threat with low observability, and reduce the production cost and LCC by standardizing conventional radars(low-altitude, coastal, anti-mortar, anti-cannon). | 8 |
| Research on technology to support electromagnetic spectrum by visualizing the usage of electromagnetic spectrum resources. | In order to appropriately execute electronic warfare, start the research on the electromagnetic spectrum management support technology for visualizing the usage of electromagnetic spectrum resources. | 9 |
| Experimental study for radio image identification technology with artificial intelligence(AI) | In order to continuously conduct ISR activity in an effective way, experiment the application of AI to the radar image target identification. | 8 |
| Simulator for comprehensive capability assessment of submarine | Conduct a research on modeling and simulation technology which enables quantitative performance evaluation of capability of submarine under different circumstances. | 20 |
| Research on infrared sensing element with high sensibility and broadband | utilize advanced semiconductor technology which Japan has been building up, establish dual-wavelength and single element infrared sensing element technology that is compact sized and light in weight, and has high sensibility and broadband. | 15 |

3 Changes in the Number of SDF Personnel

● Changes in the number of SDF personnel

(Unit: Person)

| | End of JFY2019 | JFY2020 | Change |
|--|----------------|-----------|--------|
| GSDF | 158,758 | 158,676 | △82 |
| Regular personnel | 150,777 | 150,695 | △82 |
| Ready reserve personnel | 7,981 | 7,981 | 0 |
| MSDF | 45,356 | 45,329 | △27 |
| ASDF | 46,923 | 46,943 | 20 |
| Joint units | 1,350 | 1,418 | 68 |
| Joint Staff Office | 376 | 382 | 6 |
| Defense Intelligence Headquarters | 1,918 | 1,932 | 14 |
| Internal Bureau | 48 | 49 | 1 |
| Acquisition, Technology and Logistics Agency | 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)

| | GSDF | MSDF | ASDF |
|----------------|---------|--------|--------|
| Annual average | 140,347 | 42,704 | 43,850 |

● Number of SFD reserve personnel

(Unit: Person)

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

● Number of candidates for reserve personnel

(Unit: Person)

| | GSDF | MSDF | ASDF |
|------------------------|-------|------|-------|
| SDF reserve candidates | 4,600 | 21 | 4,621 |

● Changes in the number of defense officials

(unit: person)

| | JFY2015 | JFY2016 | JFY2017 | JFY2018 | JFY2019 | JFY2020 |
|--|---|---------|---------|---------|---------|---------------------------|
| | The 13 th rationalization plan | | | | | The 14 th plan |
| Rationalization | △261 | △262 | △262 | △261 | △261 | △266 |
| Increase | 164 | 169 | 182 | 209 | 204 | 299 |
| Net Increase and decrease | △97 | △93 | △80 | △52 | △57 | 33 |
| Decrease due to the arrival of temporary post's deadline, etc. | △20 | △7 | △7 | △15 | △12 | △12 |
| Number at the end of FY | 21,161 | 21,061 | 20,974 | 20,931 | 20,903 | 20,924 |

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

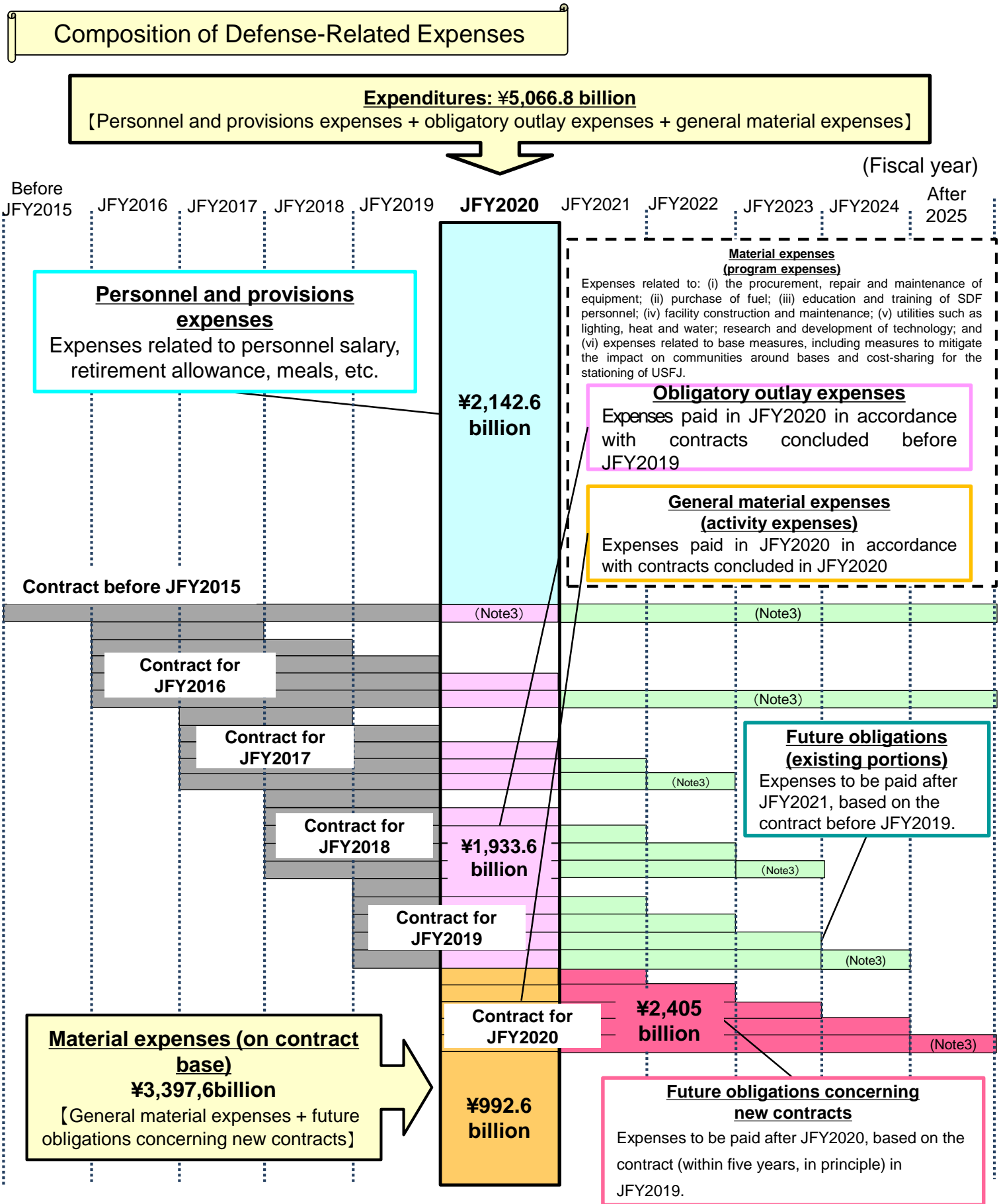
Note 2: Other than that, rationalization of organizational quota by operational reform and request for increase of personnel (160 personnel) would take place in JFY2020 budget request.

Note 3: Number at the end of FY 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: Does not include the Minister, State Minister, two Parliamentary Vice-Ministers and Senior Advisor to the Minister

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Reference



Note 1: Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/reduction and national resilience.

Note 2: This chart is a rough diagram. The length of a box does not necessarily correspond to the actual amount of expenses.

Note 3: There are expenses to be paid over 5 years in association with the introduction of long-term contracts for the procurement of equipment.

Details and Classification of Material Expenses (program expenses)

(Unit: ¥100 million)

| JFY2020 | Expenditure base | Contract base |
|---|------------------|---------------|
| Material expenses (program expenses) | 2 9, 2 6 2 | 3 3, 9 7 6 |
| Obligatory outlay expenses | 1 9, 3 3 6 | |
| General material expenses (Activity expenses) | 9, 9 2 6 | 9, 9 2 6 |
| Future obligation concerning new contracts | | 2 4, 0 5 0 |

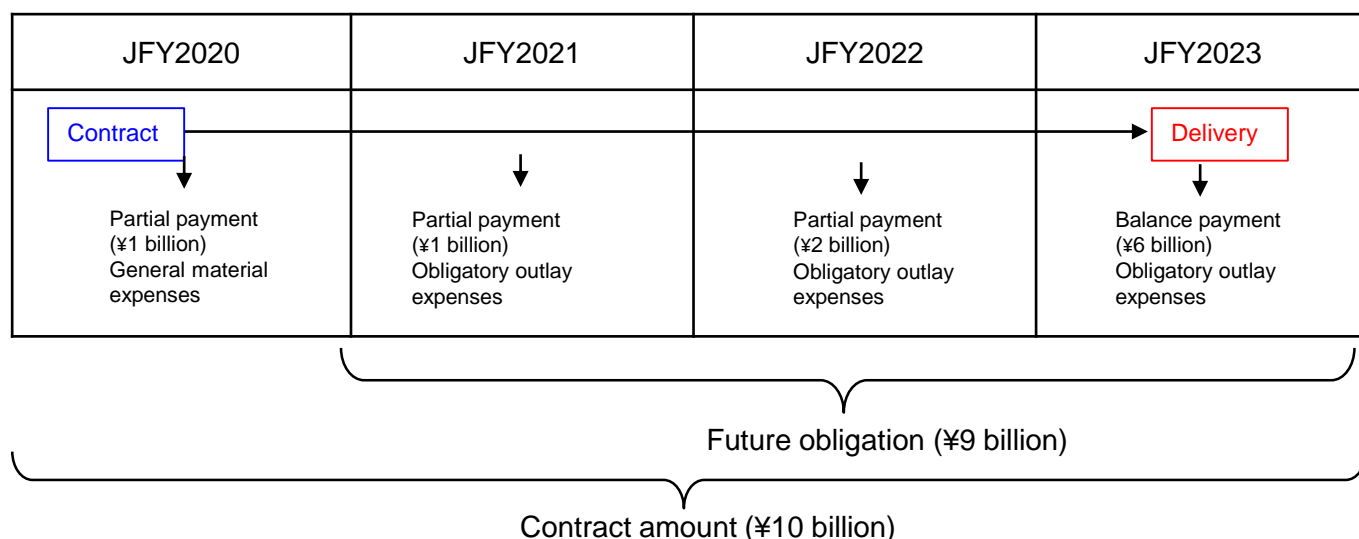
(Explanation)

- Expenditure base: Total amount to be paid in the current fiscal year for projects like procurement of equipment and facility development. Specifically, it is the sum of the expenses to be paid in JFY2020 (general material expenses) based on the contracts concluded in JFY2020 and the expenses to be paid in JFY2020 (obligatory outlay expenses) based on the contracts concluded before JFY2019. 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 JFY2020 and the expenses to be paid after JFY2021 (future obligation pertaining to new contracts) based on the contracts concluded in JFY2020. This is a useful point of view in understanding the total amount of expenses by program with respect to year-by-year projects for developing defense capabilities.

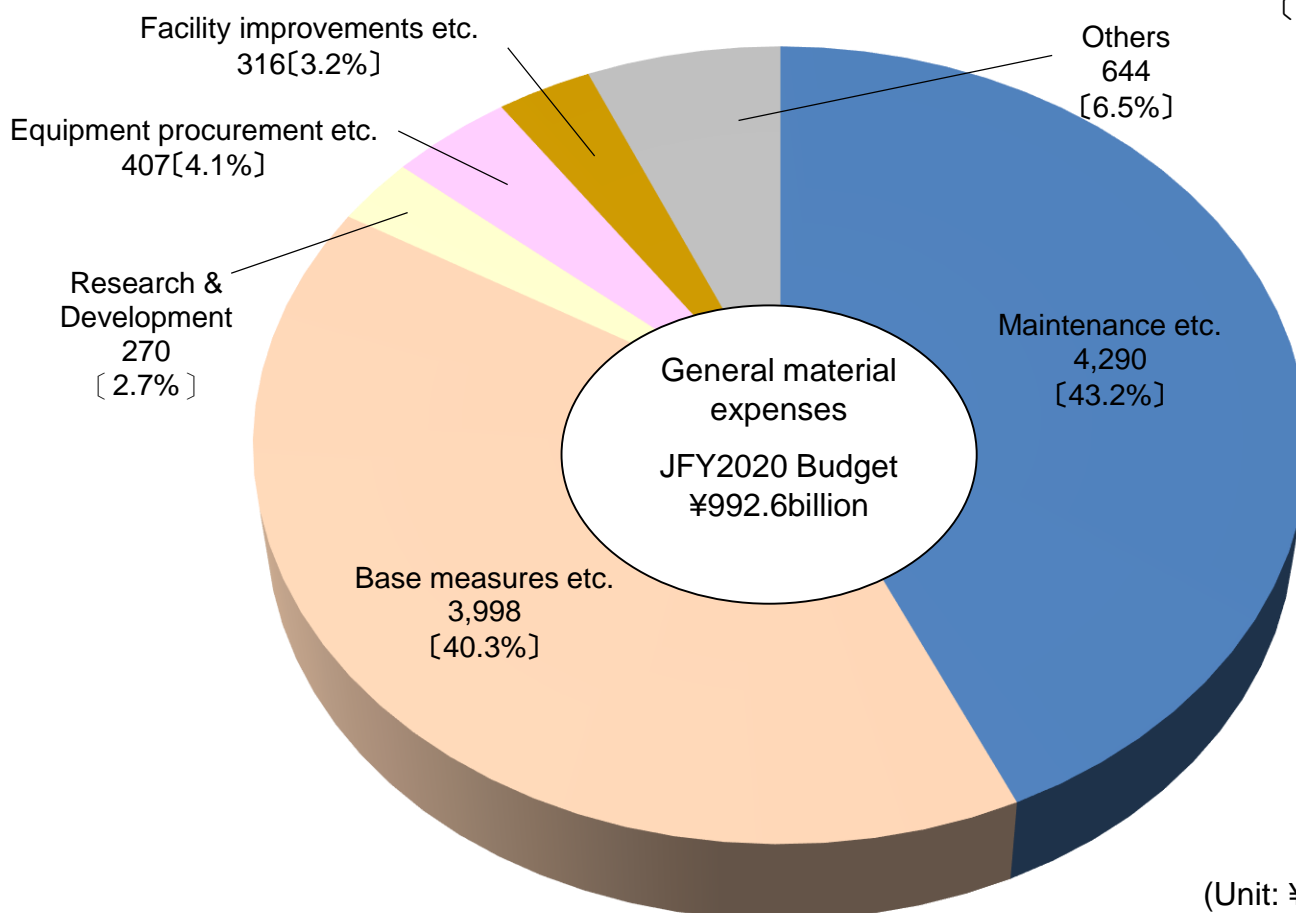
Concept for Future Obligation

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

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



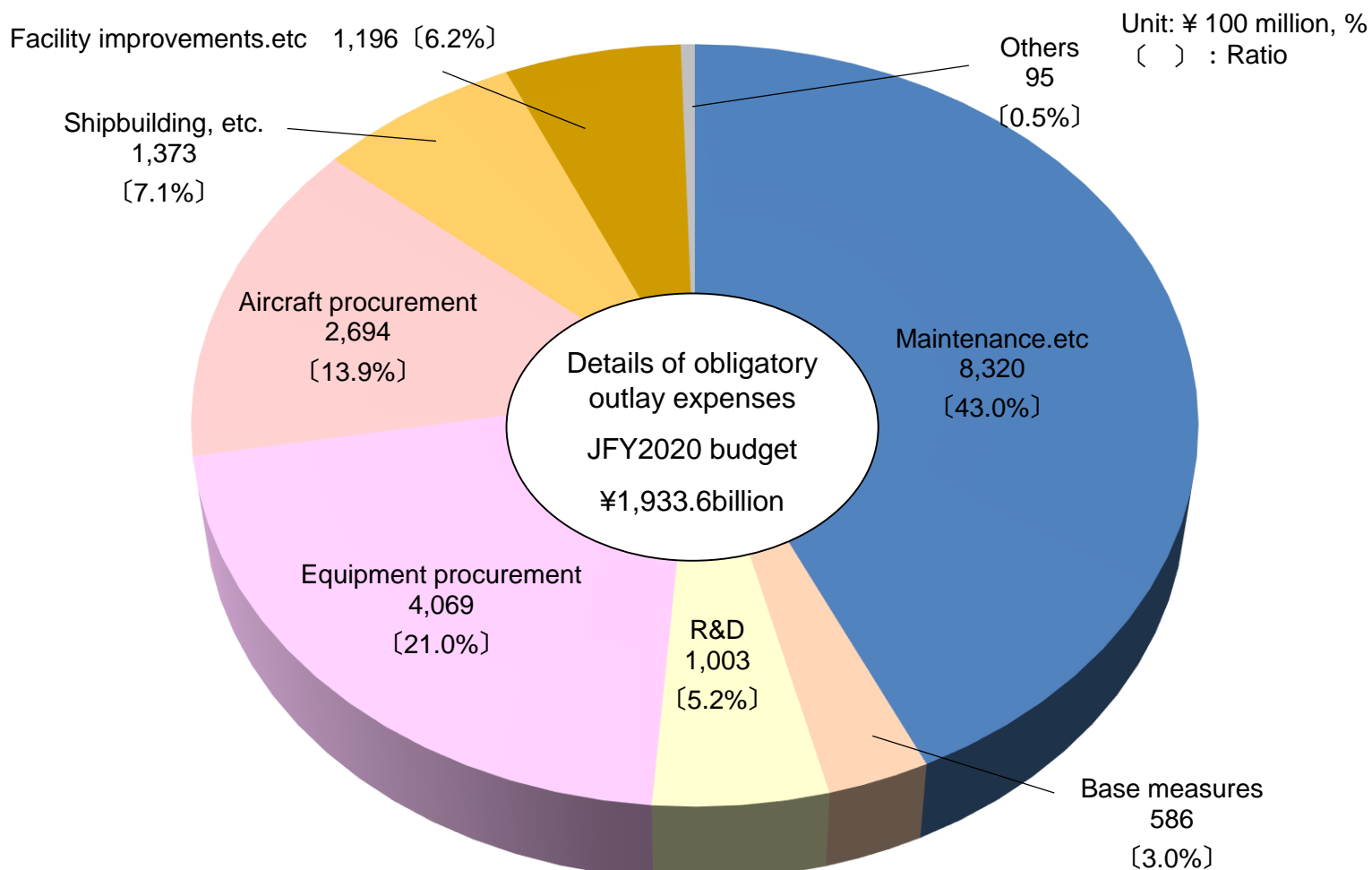
Details of General Material Expenses (activity expenses)

Unit : ¥100million, %
() : Ratio

| Item | JFY2019 Budget | JFY2020 Budget | YoY Change |
|---------------------------------------|-------------------|-------------------|---------------|
| Maintenance, etc. | 4, 1 5 6 | 4, 2 9 0 | 1 3 3 |
| • Petrol | 9 4 2 | 9 4 2 | 0 |
| • Repair | 1, 7 1 6 | 1, 8 0 7 | 9 1 |
| • Education & training | 2 8 0 | 2 8 7 | 7 |
| • Medical care, etc. | 2 6 7 | 2 6 5 | △2 |
| • Utilities | 9 5 1 | 9 8 9 | 3 8 |
| Base measures, etc. | 3, 9 8 7 | 3, 9 9 8 | 1 2 |
| • Countermeasures in areas near bases | 7 7 8 | 7 7 7 | △1 |
| • Host nation support | 1, 8 0 3 | 1, 8 1 4 | 1 1 |
| • Rent, compensation costs, etc. | 1, 4 0 6 | 1, 4 0 7 | 1 |
| Research & development | 2 6 9 | 2 7 0 | 1 |
| Equipment procurement, etc. | 5 1 8 | 4 0 7 | △1 1 1 |
| Facility improvements, etc. | 2 4 8 | 3 1 6 | 6 8 |
| Other (computer rentals, etc.) | 6 3 0 | 6 4 4 | 1 4 |
| Total | 9, 8 0 8 | 9, 9 2 6 | 1 1 8 |

Note: Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster mitigation/reduction and building national resilience.

Details of Obligatory Outlay Expenses



(Unit: ¥100 million)

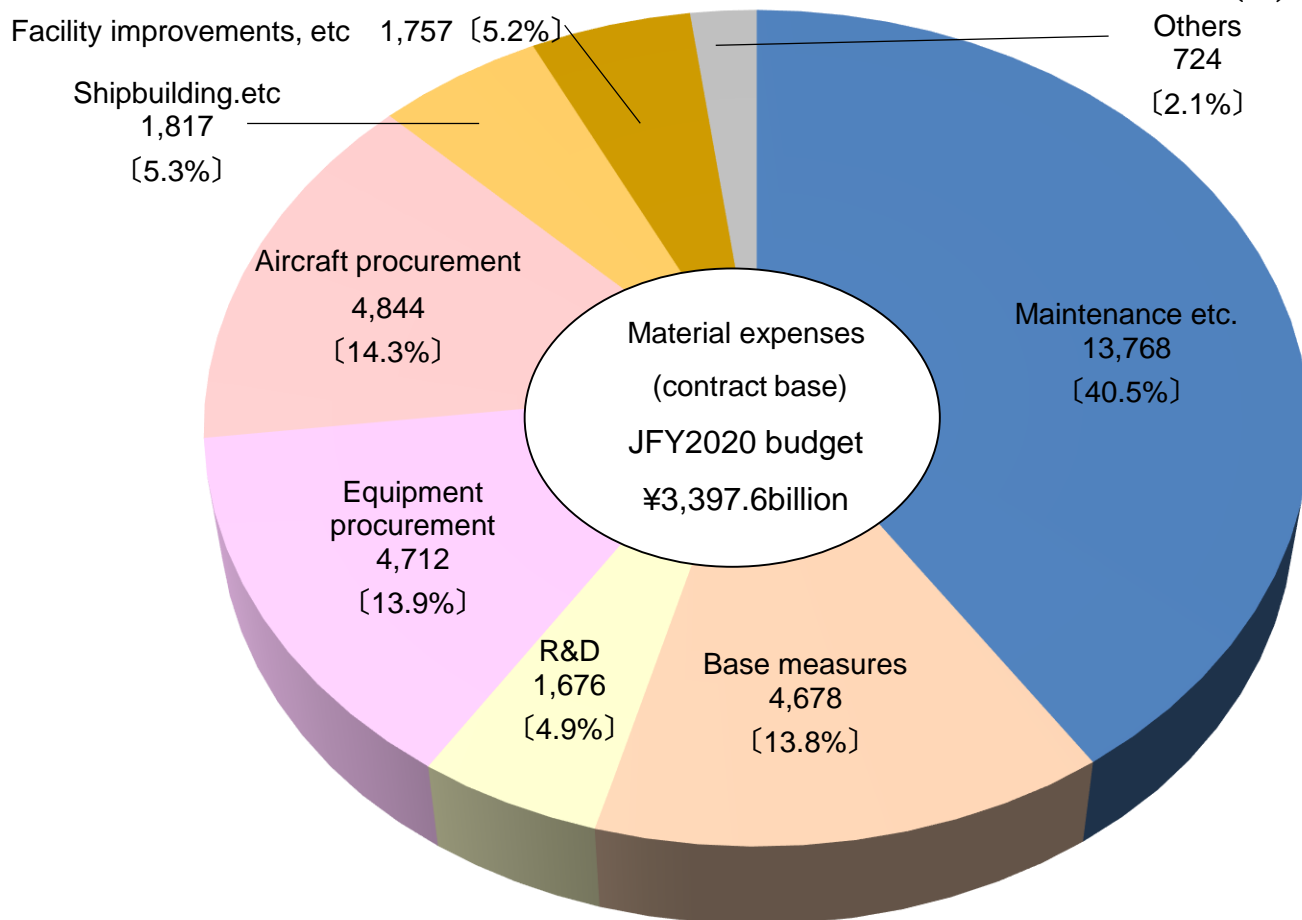
| Item | JFY2019 Budget | JFY2020 Budget | YoY Change |
|--------------------------------|-------------------|-------------------|--------------|
| Maintenance, etc. | 7, 8 7 1 | 8, 3 2 0 | 4 4 9 |
| Repair | 7, 5 2 8 | 8, 0 4 2 | 5 1 5 |
| Education & training, etc. | 3 4 3 | 2 7 8 | △ 6 5 |
| Base measures | 4 8 3 | 5 8 6 | 1 0 2 |
| Research & development | 1, 0 1 4 | 1, 0 0 3 | △ 1 1 |
| Equipment procurement | 4, 4 1 5 | 4, 0 6 9 | △ 3 4 6 |
| Aircraft procurement | 1, 9 8 4 | 2, 6 9 4 | 7 1 0 |
| Shipbuilding, etc. | 1, 4 1 2 | 1, 3 7 3 | △ 3 9 |
| Facility improvements, etc. | 1, 1 5 9 | 1, 1 9 6 | 3 7 |
| Other (computer rentals, etc.) | 9 2 | 9 5 | 3 |
| Total | 1 8, 4 3 1 | 1 9, 3 3 6 | 9 0 5 |

Note: Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience.

Details of Material Expenses (contract base)

Unit: ¥100million, %

() : Ratio



(Unit:¥100million)

| Item | JFY2019 Budget | JFY2020 Budget | YoY Change |
|--------------------------------|----------------|----------------|------------|
| Maintenance, etc. | 13,534 | 13,768 | 234 |
| Petrol | 942 | 942 | 0 |
| Repair | 10,726 | 10,897 | 171 |
| Education & training, etc. | 1,866 | 1,929 | 63 |
| Base measures | 4,610 | 4,678 | 68 |
| Research & development | 1,490 | 1,676 | 185 |
| Equipment procurement | 7,017 | 4,712 | △2,305 |
| Aircraft procurement | 3,432 | 4,844 | 1,412 |
| Shipbuilding, etc. | 1,724 | 1,817 | 93 |
| Facility improvements, etc. | 1,251 | 1,757 | 506 |
| Other (computer rentals, etc.) | 763 | 724 | △39 |
| Total | 33,821 | 33,976 | 155 |

Note1 : Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience.

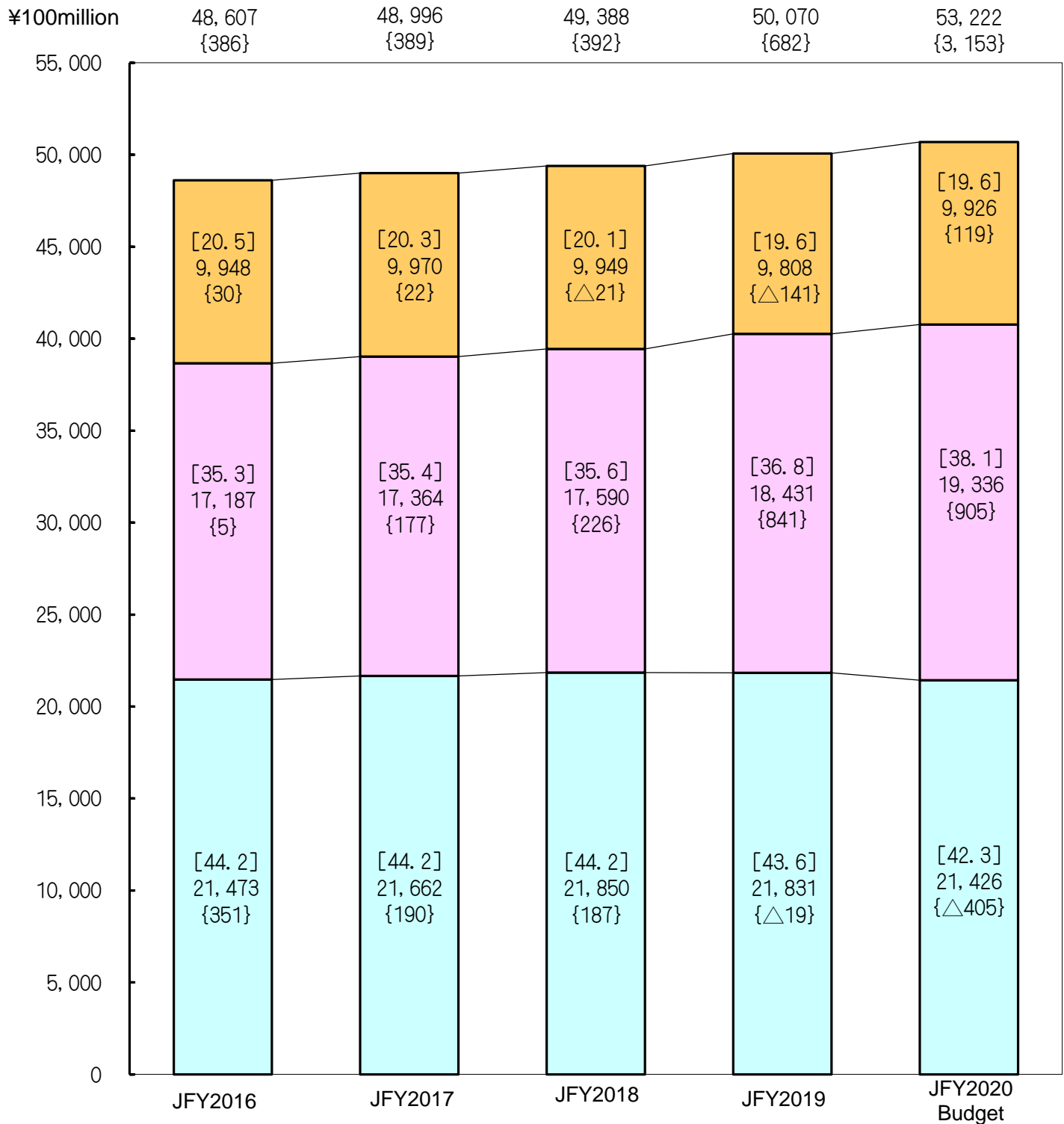
Note2 : The items in JFY2019 budget is rebelled differently because of reviewing the structure of categories, and does not necessarily align with the pamphlet ("Defense Programs and Budget of Japan overview of JFY2019 budget").

Changes in the Three Categories

General material expenses

Obligatory outlay expenses

Personnel and provisions expenses

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

Note: Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience.

Breakdown by Organization

(Unit: ¥100 million, %)

| Classification | JFY2019 Budget | JFY2020 Budget | YoY change | Growth rate |
|--|----------------|----------------|------------|-------------|
| Defense-related expenses | 50,070 | 50,688 | 618 | 1.2 |
| Ministry of Defense | 50,070 | 50,688 | 618 | 1.2 |
| (Ministry of Defense Head Office) | 48,333 | 48,886 | 553 | 1.1 |
| GSDF | 18,450 | 18,173 | △278 | △1.5 |
| MSDF | 12,247 | 11,589 | △658 | △5.4 |
| ASDF | 11,012 | 12,409 | 1,397 | 12.7 |
| Subtotal | 41,709 | 42,170 | 462 | 1.1 |
| Internal Bureau | 4,931 | 5,072 | 142 | 2.9 |
| Joint Staff Office | 521 | 548 | 28 | 5.3 |
| Defense Intelligence Headquarters | 703 | 672 | △31 | △4.4 |
| National defense Academy | 171 | 155 | △16 | △9.6 |
| National Defense Medical College | 267 | 238 | △29 | △10.8 |
| National Institute for Defense Studies | 25 | 23 | △2 | △8.6 |
| Inspector General's Office of Legal Compliance | 8 | 8 | 0 | 2.3 |
| Subtotal | 6,625 | 6,716 | 91 | 1.4 |
| (Regional Defense Bureaus) | 201 | 204 | 3 | 1.7 |
| (Acquisition, Technology and Logistics Agency) | 1,535 | 1,597 | 62 | 4.0 |

Note: Does not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), expense for the introduction of new government aircraft and expenses related to the three-year emergency measures for disaster prevention/mitigation and building national resilience.

Promotion of Measures for Bases

(Unit: ¥100 million, %)

| Classification | JFY2019 Budget | JFY2020 Budget | YoY Change | Growth Rate | Remarks |
|--|--------------------|--------------------|---------------|------------------|--|
| Promotion of measures for bases, etc. | < 4,610 > 4,470 | < 4,678 > 4,584 | < 68 > 114 | < 1.5 > 2.6 | |
| (1) Expenses for countermeasures in areas near bases | < 1,162 > 1,078 | < 1,147 > 1,153 | < △15 > 75 | < 1.3 > 7.0 | |
| Residential sound proofing | < 523 > 435 | < 509 > 518 | < △14 > 84 | < △2.6 > 19.3 | Subsidies for sound proofing work near air bases |
| Improvement of living environment of neighboring communities | < 639 > 643 | < 638 > 635 | < △1 > △9 | < △0.2 > △1.4 | Subsidies for living environment and facilities (river and road reconstruction, sound proofing systems in schools, improvements to sand control dam and public welfare facilities, etc.) |
| (2) Cost sharing for the stationing of USFJ | < 1,987 > 1,974 | < 2,005 > 1,993 | < 18 > 19 | < 0.9 > 1.0 | |
| Special Measures Agreement | 1,497 | 1,520 | 23 | 1.5 | |
| Labor cost | 1,269 | 1,287 | 18 | 1.4 | Labor cost of USFJ employees |
| Utilities | 219 | 223 | 3 | 1.5 | Cost of utilities used at USFJ facilities |
| Training relocation cost | 9 | 10 | 1 | 17.3 | Expenses related to U.S. field-carrier landing practice at Iwo To |
| Facilities Improvement Program | < 220 > 207 | < 219 > 207 | < △1 > 0 | < △0.3 > 0.0 | Improvement of USFJ facilities (barracks, family housing, etc.) |
| Measures for USFJ employees | 270 | 266 | △4 | △1.5 | Expense related to social insurance premiums by the employer |
| (3) Rent for facilities, compensation expenses, etc. | < 1,462 > 1,418 | < 1,527 > 1,438 | < 65 > 20 | < 4.4 > 1.4 | Rental cost of land used for defense facilities and compensation for loss of fisher's income, etc. |

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

Special Actions Committee on Okinawa (SACO) Related Expenditures

(Unit: ¥100 million, %)

| Item | JFY2019 Budget | JFY2020 Budget | YoY Change | Growth Rate | Remarks |
|---------------------------------------|-------------------|-------------------|------------------|--------------------|---|
| 1 Project for land return | < 39 > 121 | < 3 > 5 | < △ 36 > △116 | < △91.7 > △96.0 | Implementation of measures included within the SACO Final Report Construction and compensation, etc. to relocate the facilities provided for the land to be returned |
| 2 Project for training improvement | < 24 > 27 | < 15 > 15 | < △ 9 > △ 13 | < △39.3 > △46.8 | Transportation of personnel, etc. required for the relocation of live-fire exercise previously conducted crossing Okinawa Prefectural Route 104 |
| 3 Project for noise reduction | < 1 > 0 | < 0 > 0 | < △ 0 > △ 0 | < △79.8 > △53.5 | Implementation of noise reduction initiative |
| 4 Project for efficient SACO projects | < 108 > 107 | < 134 > 118 | < 26 > 12 | < 23.9 > 10.8 | |
| Total | < 172 > 256 | < 152 > 138 | < △ 20 > △118 | < △11.4 > △46.1 | |

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

(Unit: ¥100 million, %)

| Item | JFY2019 Budget | JFY2020 Budget | YoY Change | Growth Rate | Remarks |
|---|--------------------|--------------------|------------------|-------------------------|---|
| 1 Okinawa USMC relocation to Guam | 219 | 410 | 191 | 87.5 | Promote policies to accurately and efficiently implement measures related to realignment based on the "Government Efforts related to USFJ Structure Review" (approved by the Cabinet on May 30, 2006) and "Present Government Efforts towards Measures Approved by 2+2 in May 28, 2010" (approved by the Cabinet on May 28, 2010) Necessary expenses, etc. for Okinawa USMC relocation to Guam |
| 2 Project for realignment in Okinawa | < 1,461 > 875 | < 1,648 > 807 | < 187 > △ 68 | < 12.8 > △ 7.8 | |
| (1) Relocation of MCAS Futenma | < 707 > 611 | < 840 > 644 | < 133 > 34 | < 18.8 > 5.5 | Futenma Air Base relocation |
| (2) Return of land areas south of Kadena Air Base | < 754 > 264 | < 808 > 162 | < 54 > △ 102 | < 7.2 > △ 38.6 | Return of land areas south of Kadena Air Base |
| 3 Relocation of carrier-based aircraft, etc. | < 6 > 7 | < 5 > 1 | < △ 1 > △ 6 | < △ 10.1 > △ 87.1 | Field carrier landing practice facility |
| 4 Contingency use | < 235 > 13 | < 46 > 47 | < △ 189 > 35 | < △ 80.4 > 3.7 times | Facility improvements for contingency use |
| 5 Training relocation | 95 | 91 | △ 3 | △ 3.7 | Training relocation of U.S. aircraft to mainland Japan and Guam from Kadena Air Base and other airfields |
| 6 Project for efficient relocation related measures | < 525 > 472 | < 437 > 443 | < △ 88 > △ 28 | < △ 16.7 > △ 6.0 | |
| (1) Realignment Grants | 68 | 57 | △ 11 | △ 16.1 | |
| (2) Measures for areas surrounding bases, etc. | < 457 > 404 | < 380 > 387 | < △ 77 > △ 17 | < △ 16.8 > △ 4.3 | |
| Total | < 2,540 > 1,679 | < 2,638 > 1,799 | < 98 > 120 | < 3.8 > 7.2 | |

Overall of the Supplementary Draft Budget for JFY2019 (Ministry of Defense)

Accumulated amount from Ministry of Defense

• • • • • • • •

¥428.7billion

1 Measures for National Resiliency

¥34.4billion

Recovering the damaged SDF facilities by typhoon etc. or recovering /replacing equipment used for disaster relief operations, and procuring necessary equipment to improve disaster relief capability

- Recovery of SDF facility (Yokosuka Naval district) such as repair of damaged shore protection ¥4.1billion
 - Replacement of wheeled vehicle and facility equipment etc. ¥4billion
 - Procurement of Fixed private power generator ¥1.3billion
 - Improvement of airborne transport capability (promote procurement of transport aircraft) ¥23.4billion
 - Equipment to improve disaster relief capability (Portable bedding etc.) ¥8billion
- etc.



Recovery of damaged SDF facilities



Replacement of wheeled vehicle



Procurement of Fixed private power generator

2 Securing Stable Operation of JSDF

¥232.7billion

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

- Maintenance of vessels, aircraft, etc. ¥8.1billion
 - Promote procurement of aircraft, etc. ¥219.1billion
 - Improvement of living and working environment of SDF personnel ¥1.7billion
 - Procurement of the counter-drone system ¥2.2billion
- etc.

3 Enhancing Comprehensive air and missile defense capability

¥145.6billion

Procuring necessary equipment for enhancement of response capability against various airborne threats such as ballistic missiles.

4 Other additional financial needs

¥16billion

- Increased petrol cost and barracks fuel cost because of increase in crude oil cost ¥13.3billion
- etc.

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MINISTRY OF
DEFENSE

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Defense Programs and Budget of Japan

Overview of JFY2020 Budget Request

Published in August 2019

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