防衛省
Ministry of Defense

Defense Programs and Budget of Japan

~Defense-Strengthening Acceleration Package~

Overview of FY2022 Budget
(Including FY2021 Supplementary Budget)

Defense Programs and Budget of Japan

Overview of FY2021 Supplementary Budget/FY2022 Budget

– Content –

Concept of FY2022 Budget

1 Given a situation in which the security environment around Japan is growing increasingly severe at an unprecedented pace, with neighboring countries strengthening their military capabilities through substantial increases in defense spending, Japan will significantly enhance the necessary defense capabilities in order to respond to these changes, working to build a "Multi-Domain Defense Force" equipped with capabilities in space, cyberspace and the electromagnetic spectrum, capabilities in the maritime and air domains, comprehensive air and missile defense capabilities to respond to diverse airborne threats, stand-off defense capability, maneuvering and deployment capability, and secure ammunition and ensure maintenance of equipment.
In addition, in order to security technological superiority in the defense field, Japan will enhance research and development into potential game-changing technologies and strengthen the defense industrial base. Moreover, Japan will reinforce the human resource base by securing sufficient high-quality SDF personnel and improving their treatment, etc., as well as strengthen the Japan-U.S. Alliance and security cooperation with other countries.

2 Based on this concept, Japan has decided to move up budget implementation for projects planned for the FY2023 initial budget on an unprecedented scale, in order to accelerate its defense capability enhancement from FY2022. MOD/SDF will greatly bolster its defense capabilities by combining and branding its FY2021 supplementary budget and the FY2022 annual budget the "Defense-Strengthening Acceleration Package".

3 Japan will strengthen its defense capability effectively by allocating resources flexibly and intensively without necessarily adhering to the existing budget and human resource allocation. Furthermore, the SDF will further promote joint-ness of the Ground, Maritime and Air Self-Defense Forces (GSDF/MSDF/ASDF) in all areas, avoid a stove-piped approach and optimize their organizations and equipment.

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

Ⅰ Defense-Related Expense
-Defense-Strengthening Acceleration Package-

● In view of the unprecedented speed at which the security environment around Japan is becoming severe, it is imperative that MOD/SDF even further accelerate the implementation of various projects in order to greatly enhance its defense capability. **Branding its FY2021 supplementary budget and the FY2022 annual budget the "Defense-Strengthening Acceleration Package"** (a.k.a. "16 month budget"), MOD/SDF has secured 5.8661 trillion yen (6.1774 trillion if including U.S. Forces realignment), which is a **significant increase in defense budget from the previous year (1.09% of GDP).**

Main numbers

Under the Defense-Strengthening Acceleration Package, combining the FY2021 supplementary and FY2022 annual budget, the budget allocated towards the MTDP is as follows:

- Expenditures are ¥5.8661 trillion, a significant increase from the previous year

Went up by ¥355.9 billion (6.5%) from the **FY2020 supplementary + FY2021 initial budget** (If including U.S. Forces relocation, up by ¥445.4 billion (7.8%))

- Material expenses (Contract fees for newly necessary programs) are ¥3.8388 trillion, a significant increase from the previous year

* "FY2020 supplementary budget" refers to FY2022 3rd supplementary budget

Went up by ¥370 billion (10.7%) from the **FY2020 supplementary + FY2021 initial budget**

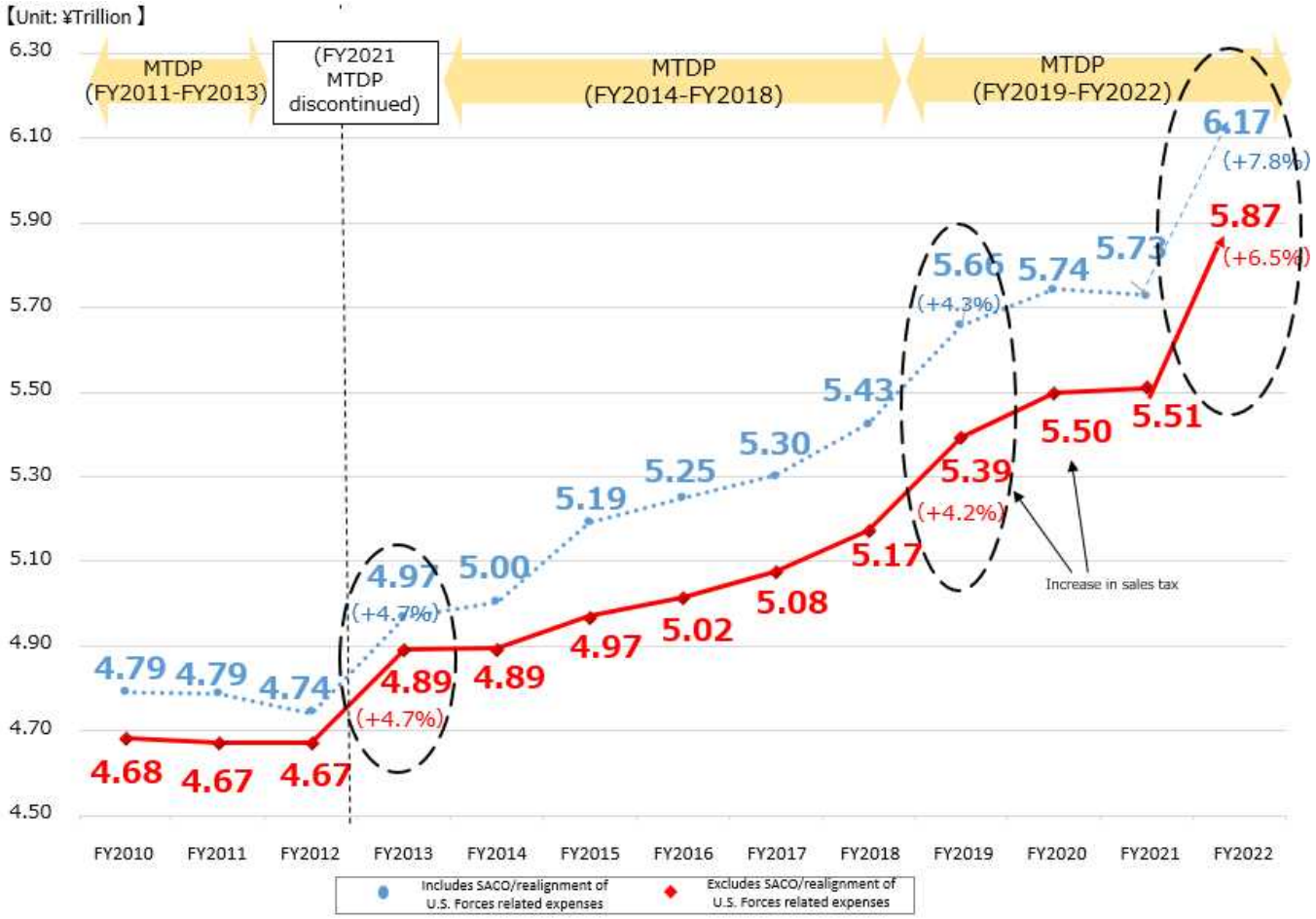
○ Procured all of the major equipment as requested, including the equipment in the MTDP Annex, under the Defense-Strengthening Acceleration Package

○ For R&D expenses (contract-based), procured ¥291.1 billion by securing necessary expenses for major projects such as F-X and enhancement of stand-off defense capability, and greatly boosting investment towards cutting-edge technologies that are potentially game-changing, a ¥79.6 billion (37.6%) increase and the highest amount ever

○ The FY2022 annual budget (expenditure) is ¥5.1788 trillion (¥5.4005 trillion if including U.S. Forces realignment) , a ¥55.3 billion (1.1%) increase from the previous year, continuing the 10 year trend of increasing expenses. Future obligations regarding new contracts had stayed stagnant during the period of the current MTDP; however, this saw a significant increase of ¥49.3 billion (2.0%), bringing it to ¥2.4583 trillion yen. Both are record numbers.

(Note: Future obligation concerning new contracts: FY2019 ¥2.4013t → FY2020 ¥2.4050t (+0.2%) → FY2021 ¥2.409t (+0.2%))

Transition of Expenditures (Package; "15-month budget")



Defense-Strengthening Acceleration Package

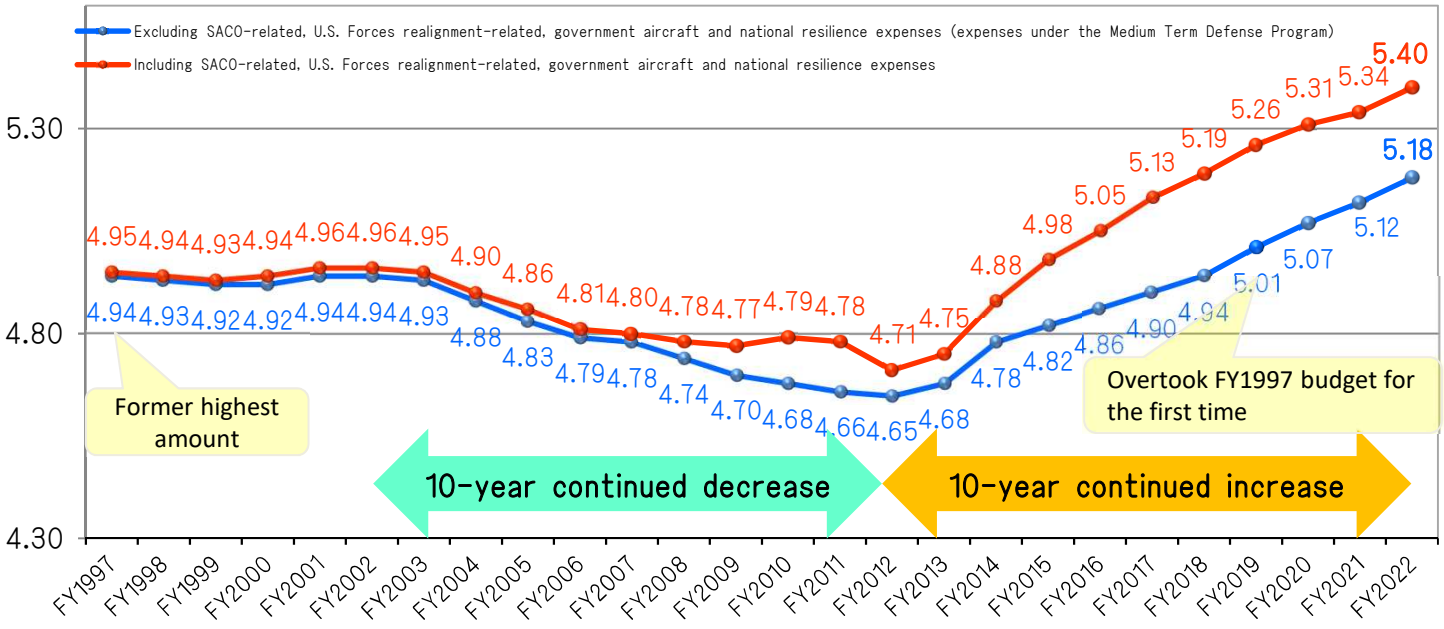
(Unit: ¥100M)

Categories	FY2020 Supplementary Budget + FY2021 Annual Budget			Defense-Strengthening Acceleration Package (FY2021 Supplementary + FY2022 Annual)						
	FY2020 Supplementary Budget A	FY2021 Annual Budget B	Total C=A+B	FY2021 Supplementary Budget D	FY2022 Annual Budget E	Total (※) F=D+E	Year on Year (Y on Y) change G=F−B	Growth Rate	Year on Year (Y on Y) change H=F−C	Growth Rate
Expenditures (three categories)										
Defense-related expenses	3,867	51,235	55,102	**6,873**	**51,788**	**58,661**	**7,426**	**14.5%**	**3,559**	**6.5%**
	(3,867)	(53,422)	(57,290)	**(7,738)**	**(54,005)**	**(61,744)**	**(8,321)**	**15.6%**	**(4,454)**	**7.8%**
Personnel and provisions expenses	-	21,919	21,919	106	21,740	21,847	▲72	▲0.3%	▲72	▲0.3%
Material expenses	3,867	29,316	33,183	6,767	30,048	36,815	7,499	25.6%	3,632	10.9%
	(3,867)	(31,504)	(35,371)	(7,632)	(32,265)	(39,897)	(8,393)	26.6%	(4,526)	12.8%
Obligatory outlay expenses	3,257	19,377	22,634	4,287	19,651	23,938	4,561	23.5%	1,304	5.8%
	(3,257)	(20,378)	(23,635)	(4,934)	(20,573)	(25,506)	(5,128)	25.2%	(1,871)	7.9%
General material expenses (activity expenses) 〔Ⓐ〕	610	9,939	10,549	2,480	10,397	12,876	2,937	29.6%	2,327	22.1%
	(610)	(11,125)	(11,735)	(2,699)	(11,692)	(14,391)	(3,265)	29.4%	(2,655)	22.6%
Future obligations concerning new contracts 〔Ⓑ〕	48	24,090	24,138	928	24,583	25,511	1,421	5.9%	1,373	5.7%
	(48)	(25,951)	(25,999)	(928)	(29,022)	(29,951)	(4,000)	15.4%	(3,951)	15.2%
Material expenses (contract based) 〔Ⓐ+Ⓑ〕	658	34,029	34,688	**3,408**	**34,980**	**38,388**	**4,358**	**12.8%**	**3,700**	**10.7%**
	(658)	(37,076)	(37,735)	**(3,627)**	**(40,714)**	**(44,341)**	**(7,265)**	**19.6%**	**(6,607)**	**17.5%**

(Note)
1. [ ]: growth rate (%).
2. FY2020 supplementary budget refers to the FY2020 3rd supplementary budget.
3. The upper figures in each cell do not include SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), etc. The lower figures in parentheses indicate the expenses that include those above.
In total, the amount of SACO-related expenses is: FY2021: (Expenditure) ¥14.4 billion; (Future obligation concerning new contracts) ¥3.5 billion;
FY2022: (Expenditure) ¥13.7 billion; (Future obligation concerning new contracts) ¥4.6 billion
The total amount of U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) is:
FY2021: (Expenditure) ¥204.4 billion; (Future obligation concerning new contracts) ¥182.6 billion
FY2022: (Expenditure) ¥208 billion; (Future obligation concerning new contracts) ¥439.4 billion
4. Digital Agency-related expenses:
FY2021: (Expenditure) ¥18.7 billion; (Future obligation concerning new contracts) ¥21.7 billion
FY2022: (Expenditure) ¥31.8 billion; (Future obligation concerning new contracts) ¥18.9 billion
5. Long-term contracts:
FY2021: (Expenditure) ¥1.5 billion; (Future obligation concerning new contracts) ¥21.1 billion
FY2022: (Expenditure) ¥1 billion; (Future obligation concerning new contracts) ¥13.6 billion
6. The exchange rate for FY2022 is set at 1USD=¥108.

Reference: Change in Expenditure (Annual Budget)

(Unit: ¥Trillion)



Notes 1: Numbers in the text are on a contract base unless otherwise specified.
2: Blue text indicates new programs.
3. Ⓢ refers to the FY2021 supplementary budget.

II Priorities for Strengthening Capabilities Necessary for Cross-Domain Operations

As the security environment surrounding Japan grows increasingly severe and uncertain at an alarming rate, Japan will build up a defense capability that 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.

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

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

Space-related budget: ¥79 billion *

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

(1) Capabilities in Space Domain

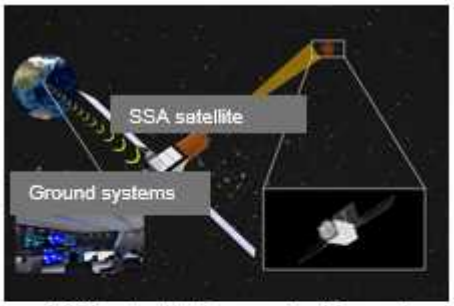
Enhancement of SSA (*)

○ Procurement of SSA satellite (space-based optical telescope) (¥3.9 billion)
- Detailed design for satellite ground system
- Technical support relating to satellite manufacture and operation

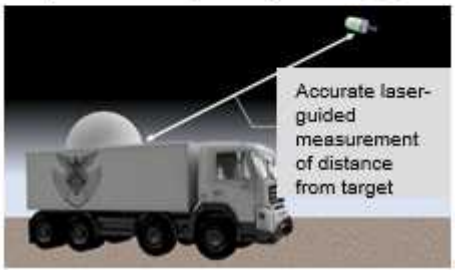
○ Procurement of SSA laser ranging equipment (¥19 billion)
To ensure stable use of space, procure SSA laser ranging equipment more capable of accurately monitoring space objects in low orbit

○ Development of SSA systems (¥7.7 billion)
Procure necessary related components to perform SSA in cooperation with the U.S. military and relevant domestic organizations

* SSA: Space Situational Awareness



SSA satellite (conceptual image)



SSA laser ranging equipment

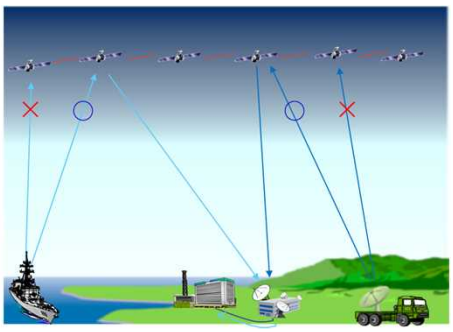
Study on Utilization of Satellite Constellations for Missile Defense

○ Study on concept of HGV(*) detection and tracking systems (¥0.3 billion)
Concept study on a prototype system to verify the following technology: detection and tracking of HGVs from space by using satellite constellations that have multiple IR observation satellites.

* HGV: Hypersonic Glide Vehicle

○ Research on infrared sensor with high sensitivity and broad detection range (¥1.2 billion)
(See p. 29)

Enhancing Space Resiliency



Satellite communication tests using satellite constellation (conceptual image)

○ Enhance resiliency of satellite communications systems (¥9.9 billion)
- Develop a system that enables seamless interoperability between X-band defense communication satellites and other commercial communication satellites
- Research and testing on SATCOM using satellite constellation
- Mount Michibiki response equipment on all vessels

Strengthening Information Gathering Capability Using Outer Space

○ Research on AI technology for tracking moving targets using satellite constellation (¥0.1 billion) (See p. 29)

○ Utilizing satellite imagery data (¥16.4 billion)
- Procuring data for image analysis (various commercial satellites, including small satellite constellations that allow frequent imaging)
- Acquiring satellite information that contributes to maritime surveillance

X-band defense communication satellite (conceptual image)

○ Utilization of satellite communication (¥12.9 billion)
- Research on next-generation military communications satellites
- Development and maintenance of X-band defense communication satellite
- Leasing commercial communication satellite lines; development and maintenance, etc. of satellite communication equipment

Enhancing Organizational Structure

○ Reorganization of the Space Operations Group
- The existing Space Operations Squadron will be reorganized into the 1st Space Operations Squadron; additional personnel will be assigned in order to build a structure capable of constantly monitoring the situation in outer space.
- The 2nd Space Operations Squadron and the Space System Management Squadron will be newly formed. The former will be in charge of detecting jamming against Japan's satellites; the latter will maintain and manage equipment relating to the space domain.

Other Measures Related to Space Policy

○ International cooperation with other countries (¥0.1 billion)

- Acquire knowledge related to outer space by sending personnel to “Space 100” or other space courses provided at the U.S. Space Force base in Colorado, USA

- Japan-U.S. working-level consultations
  Conduct a field survey of the Joint Interagency Combined Space Operations Center (JICSpOC) and exchange opinions between Japan and the U.S. at the working level to obtain information on integrated operational procedures for SSA, etc.

Scene from working-level consultations (stock image)

- Participate in multilateral space domain table-top exercises
  Strengthen multilateral cooperation in the space domain through participation in space-related multilateral table-top exercises (Schriever Wargame, etc.) hosted by the U.S.

Scene from multilateral table-top exercises (stock image)

*** Budget related to BMD (only the space-related portion): ¥38.7 billion**

Cyber-related budget: ¥34.2 billion

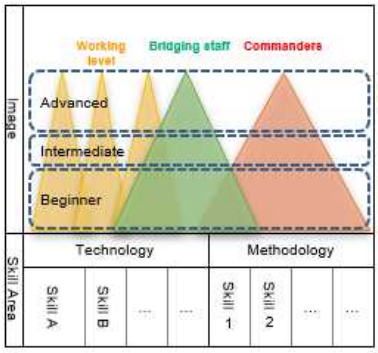
(2) Capabilities in Cyber Domain

Enhancing Posture of Cyber-Related Units

○ Enhancing posture of cyber-related units
Strengthen the SDF’s cyber defense capabilities by expanding its cyber-related units, including personnel increase of the joint unit, JSDF Cyber Defense Command

Securing and Developing Cyber Workforce

○ Research to create a common skill evaluation index for cyber workforce (¥50 million)
Conduct studies on skill evaluation methodologies for cyber workforce in the private sector and foreign defense authorities, with the aim of establishing the MOD/SDF’s own skill evaluation index in order to effectively and efficiently secure and develop cyber workforce.



A common skill evaluation index for cyber workforce (conceptual image)

○ Recruitment of the Chief Cybersecurity Advisors (¥40 million)
Strengthen capabilities in the cyber domain by recruiting top-tier cyber talents as part-time government officials, considering the difficulty of in-house development of top-tier cyber experts

○ Development of highly skilled cyber workforce (¥10 million)
Conduct training at external educational institutions to further the development of a highly skilled workforce with advanced cybersecurity knowledge and skills

○ Utilizing external resources in dealing with cyber attacks (¥3.8 billion)
Utilize external resources for tasks requiring a high level of expertise in dealing with cyber attacks

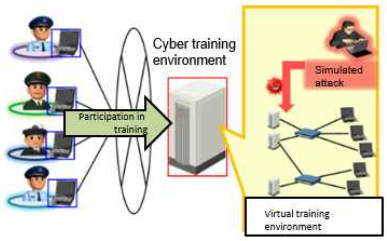
○ Research on foreign defense authorities' utilization of external human resources in the cyber domain (¥30 million)
Conduct research on the utilization of external human resources (e.g. reserves and part-timers) in the cyber domain by foreign defense authorities, in order to collect information for the MOD/SDF's designing of future cyber posture for sustained, effective utilization of external human resources

Utilizing Cutting-Edge Technology in the Field of Cyberspace

○ Research on technologies for dealing with cyber attacks (¥2.4 billion) (See p. 30)

Training Cyber Workforce

○ Development of cyber training equipment (¥1.2 billion)
Increase cyber training equipment accessible to all SDF cyber-related units for practical cyber training



Operation of cyber training environment (conceptual image)

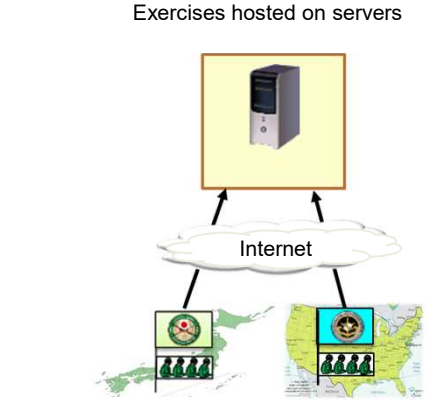
Participation in international cyber trainings (sample image)

○ Bolstering cooperation with foreign countries in the cyber domain (¥0.2 billion)

- Participation in international cyber trainings
Participate in advanced foreign education and exercises to improve the MOD/SDF's capability to respond to cyber attacks by acquiring skills and knowledge that are difficult to cultivate internally

- Hosting cybersecurity exercise
Have the GSDF Signal School host a cyber exercise to enhance cyber capabilities, which SDF's cyber-related units, U.S. Forces, and other participants will attend

- Participation in NATO CCDCOE's cyber defense exercise
Participate in "Locked Shields", an international live-fire cyber defense exercise hosted by the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE)



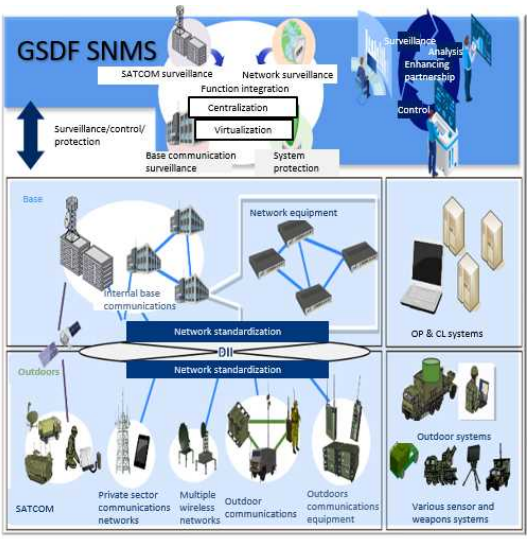
Hosting cyber exercise (conceptual image)

Strengthening System Resilience

○ Enhancing the protective functions of the closed Defense Information Infrastructure (DII) system (¥8.0 billion)
Enhance protective functions of the DII, common communications infrastructure shared by the MOD/SDF.

○ Development of system network management functions (¥6.4 billion)
Develop the System Network Management System (SNMS), a centralized system for the protection, monitoring and control of all GSDF systems

○ Research on cybersecurity regarding the MSDF's OT systems (¥10 million)
Conduct research relating to cybersecurity for OT (Operational Technology) systems in order to improve vulnerability assessment methods and countermeasures against cyberattacks for OT systems in the MSDF's vessels and aircraft



Development of SNMS (conceptual image)

(3) Capabilities in Electromagnetic Domain

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

○ Development of stand-off electronic warfare aircraft (¥19 billion)
(See p. 30)

Stand-off electronic warfare aircraft (conceptual image)

○ Improve EW capabilities of utility aircraft UP-3D (¥5.7 billion)
Update onboard equipment and retrofit airframe to improve capability of supporting EW drills by vessels

Utility aircraft (UP-3D)

○ Enhance surveillance capabilities of vessels' radio detection and jamming equipment (¥0.3 billion)
In order to enhance surveillance capabilities, modify radio detection and jamming devices that detect radio waves from aircraft and missiles and emit radio waves to neutralize them.

○ Formation of new electronic warfare unit
Through regular collection and analysis of waves in peacetime and neutralization of enemy use of radio waves in emergency situations, enhance functions that would be advantageous in various battle situations.

Strengthening Capability to Minimize Electromagnetic Jamming from Opponents Attempting to invade Japan

○ Procurement of F-35A (8 fighters: ¥76.8 billion)
Procure F-35A with superior electronic protection capability and secure air superiority. Request another ¥37.4 billion as other related costs (maintenance equipment, etc.).

※ As it was confirmed that it would be less costly to have national companies perform the final checkout and assembly than to import assembled aircraft, national companies are performing FACO for F-35A procured in FY2022 (same as FY2019-2022)

F-35A

○ Procurement of F-35B (4 fighters: ¥51 billion)
Procure F-35B with superior electronic protection capability and STOVL capability to improve flexibility of fighter operation. Request another ¥20.5 billion as other related costs (maintenance equipment, etc.).

F-35B

○ F-15 upgrade (¥52 billion)
Implement necessary upgrades, including installing stand-off missiles, increasing ammunition payload, and improving electronic warfare capability, in order to provide effective defense against surrounding countries' enhanced air forces and appropriately fulfill various duties including air defense.

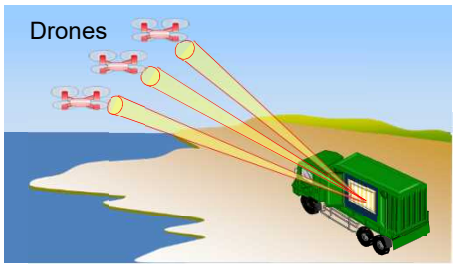
F-15

Research Towards Introduction of Future Technologies in the Electromagnetic Domain

○ Demonstration of HPM* radiation technology (¥7.2 billion)
(See p. 28)

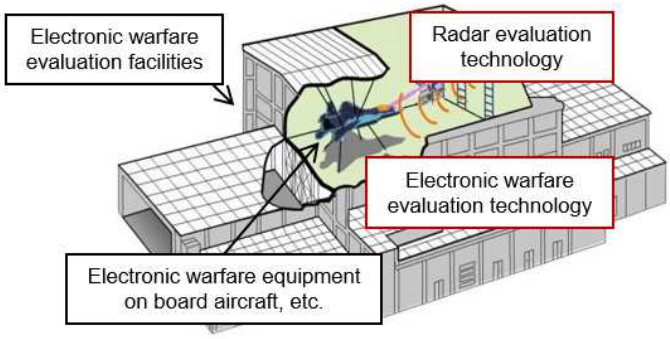
* HPM: High-Power Microwave

○ Research on high-power laser system (¥3.9 billion)
(See p. 28))



HPM radiation technology (conceptual image)

○ Research on electronic warfare evaluation technology (¥4.6 billion) (p. 30)



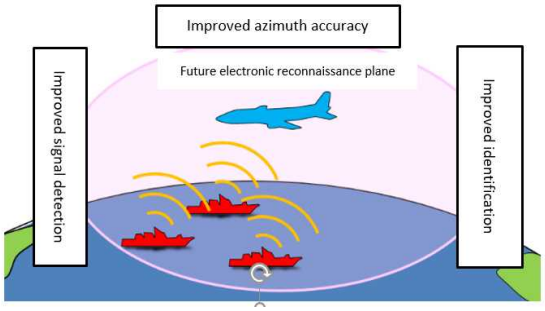
Research on electronic warfare evaluation technology (conceptual image)

Strengthening Intelligence Capability Related to Electromagnetic Spectrum

○ Procurement of devices mounted on signals intelligence aircraft (RC-2) (¥4.6 billion)
In order to enhance information gathering capability, procure fuselage components for RC-2, whose new capabilities include an expanded frequency range for receiving radio waves and enhanced long-distance target collection capability. RC-2 will succeed the current radio wave information gathering aircraft (YS-11EB)

Signals intelligence aircraft

○ Research on reconnaissance system for MSDF future electronic reconnaissance aircraft (¥1.6 billion) (See p. 30)

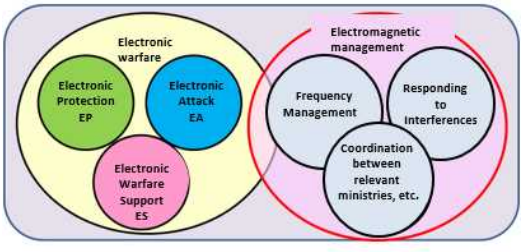


Research on reconnaissance system for future electronic reconnaissance aircraft (conceptual image)

○ Studies and research on the installation of sensor systems for multi-use aircraft (¥30 million)
Conduct studies and research into the technological requirements and support systems needed to install AI on multi-use aircraft used by the MSDF, towards development of a successor (future electronic reconnaissance aircraft) to the EP-3 (expected to be decommissioned in the future).

Enhancement of Electromagnetic Management Capabilities

○ Development of electromagnetic management functions (¥0.3 billion)
Improve the GSDF command system's electromagnetic wave management capabilities by adding functions to support optimization of frequency allocation within GSDF and by connecting it to the Joint Staff's central command system.



○ Management of electromagnetic signatures of vessels (¥40 million)
Study the electromagnetic signatures of MSDF vessels and implement studies that will contribute future vessel design

Strengthening Posture of Communication and Information Sharing

○ Improvement of tactical data link (¥12.8 billion)
Improve tactical data link for aircraft and vessels for swift forwarding/sharing of target information

Training/Exercise, Developing Human Resources

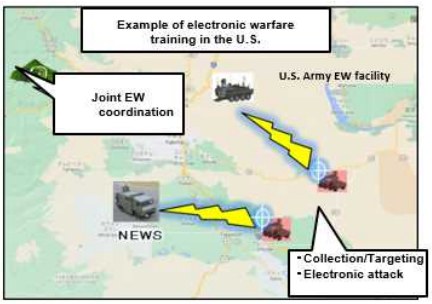
○ Procurement of radio-wave collector emulator system for the RC-2 (¥90 million)
Procure onboard radio-wave collector emulator system in order to enhance the radio wave collection skills of personnel on board the RC-2 aircraft.

○ Joint EW drills (¥20 million)
Conduct joint electronic warfare training among the GSDF, MSDF, and ASDF to enhance operational capabilities in the electromagnetic domain

Joint electronic warfare training (conceptual image)

○ EW drills in the U.S. (¥20 million)
To improve the skills of GSDF electronic warfare unit personnel, implement EW drills in joint exercises with U.S. Army in the United States.

○ Dispatch personnel to an educational course on electronic warfare in the U.S. (¥4 million)
Dispatch personnel from the ASDF to electronic warfare operation course for officers held in the U.S. and acquire command and control capability regarding EW operations

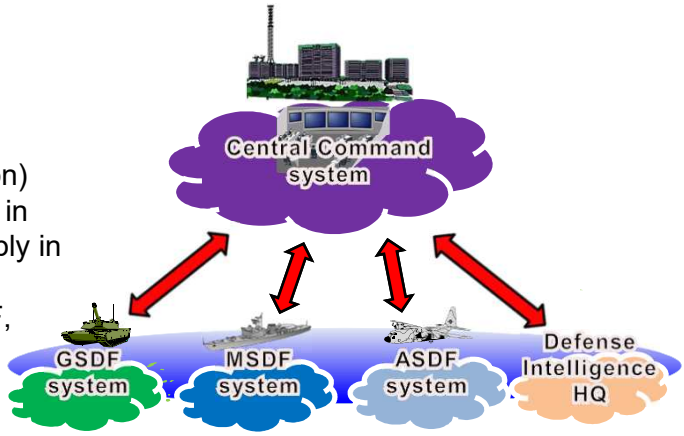


Electronic warfare drill in the United States (conceptual image)

(4) Other General Items

Enhancement of System Network Stability

○ Replacement of Central Command System (¥2.6 billion)
Replace systems for facilitating command and control in order to enable MOD/SDF to respond swiftly and flexibly in all situations by centrally consolidating and sharing operationally necessary information held by the GSDF, MSDF, and ASDF.



Central command system (conceptual image)

Training & Exercises to Enhance Cross-Domain Operational Capabilities

○ Japan-U.S. command post exercises for cross-domain operations at the command level (¥380 million)
Conduct command post exercises between the GSDF and the U.S. Army, focusing on procedures for operations in new domains such as cyberspace and electromagnetic spectrum, in order to improve the GSDF's cross-domain operational capabilities and coordination procedures with the U.S. Army.

Japan-U.S. command post exercise YS (Yama Sakura)

○ Japan-U.S. field exercises for cross-domain operations (¥40 million)
Conduct field exercises between the GSDF and the U.S. Forces such as the U.S. Army and U.S. Marine Corps for cross-domain operations, in order to strengthen Japan-U.S. cooperation and improve joint response capabilities

Domestic field exercise with U.S. Army (Orient Shield)

Domestic field exercise with U.S. Marine Corps (Resolute Dragon) (stock image)

2 Enhancing Capabilities in Traditional Domains

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

(1) Capabilities in Maritime and Air Domains

Strengthening Posture for Persistent ISR (Intelligence, Surveillance and Reconnaissance)

○ Upgrading the Japan Aerospace Defense Ground Environment (JADGE) system (¥1.8 billion)
Incorporate AI into the JADGE system and improve the speed and certainty of commanders' situation assessments, in order to deal with increasingly various and complex airborne threats

○ Procurement of fixed-wing patrol aircraft (P-1)
(3 aircraft: ¥77.6 billion, of which Ⓢ¥63.5 billion)
Procure P-1s as the successor to the current P-3C fixed-wing aircraft
* Improved detection/identification capabilities, flight performance, and information processing capabilities, etc., compared to previous P-1s

Fixed-wing patrol aircraft (P-1)

○ Refurbishment of patrol helicopters (SH-60K) to rescue specification (2 helicopters: ¥1.2 billion)
Refurbish SH-60Ks to rescue specification to maintain rescue capability

Patrol helicopter (SH-60K)

○ Procurement of MSDF minesweeping and transport helicopter (MCH-101) (1 aircraft: ¥6.1 billion)
Procure an MCH-101 for transportation to accommodate the increasing number of MSDF vessels

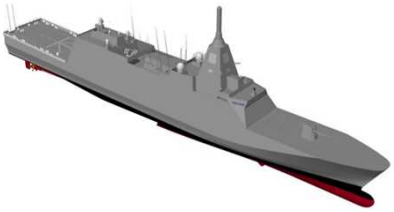
Minesweeping and transport helicopter (MCH-101)

○ Test operation of long-endurance UAVs (*) (¥4.7 billion)
Conduct test operations to verify suitability for various MSDF missions; look into cooperation procedures with manned aircraft, etc., and study how they will conserve manpower and labor.

* UAV: Unmanned Aerial Vehicle

○ Research on miniature ship-based UAVs (performance tests) (¥0.6 billion)
Conduct performance tests using equipment prepared by private sector companies in order to confirm compatibility and operability of ship-based UAVs with MSDF vessels

○ Construction of destroyers
(2 ships: ¥110.3 billion, of which Ⓢ¥7.5 billion)
Construct two destroyers (ninth and tenth ships of FFM (3,900 t class) built in FY2018), equipped with compact hulls and improved multirole capability (such as mine countermeasures, which were conventionally served by minesweeping vessels), bringing the total number of destroyers to 54.



FY2022 destroyer (3,900 t) (conceptual image)

○ Construction of submarine (SS; 1 ship: ¥73.6 billion)
Conduct reconnaissance in the waters around Japan with 22 submarines
・Construct a submarine (sixth new class ship (3,000 t class) built in FY2017) with enhanced capability (detection, etc.) to effectively carry out warning and surveillance activities

FY2017 class submarine (3,000 t) (conceptual image)

○ Construction of minesweeping vessel (MSO; 1 ship: ¥13.4 billion)
Construct a minesweeping vessel (fifth Awaji-class ship (690 t)) with enhanced mine countermeasure capabilities and an FRP hull instead of a wooden hull, improving durability

○ Construction of oceanographic research vessel (AGS; 1 ship: ¥27.9 billion)
Construct oceanographic research vessel (3,500 t) to maintain maritime environmental data collection capabilities

○ Construction of ocean surveillance vessel (AOS; 1 ship: ¥19.6 billion)
Construct ocean surveillance vessel (fourth Hibiki-class ship (2,900 t)) to improve oceanic acoustic information collection capabilities.

Hibiki-class ocean surveillance vessel (2,900t)

○ Designing basic structure of patrol ship (¥0.4 billion)
Basic design support work towards the introduction of patrol vessels that specialize in warning and surveillance and can be operated with minimal personnel

○ Formation of Reconnaissance Group (tentative name)
Abolish the Temporary Reconnaissance Group and form the Reconnaissance Group (tentative name) in order to strengthen operational availability of the RQ-4B Global Hawk and ensure that they are capable of gathering intelligence in areas relatively far from Japan and conducting continuous airborne surveillance in tense situations.

RQ-4B Global Hawk (Aircraft undergoing testing at manufacturing company)

Obtaining and Maintaining Air Superiority

○ Procurement of F-35A (8 fighters: ¥76.8 billion) (See p. 9)

○ Procurement of F-35B (4 fighters: ¥ 51 billion) (See p. 9)

○ F-15 upgrade (¥ 52 billion) (See p. 9)

F-2

○ F-2 upgrade (2 fighters: ¥3.2 billion)
In order to respond to the modernization of maritime and air forces of neighboring countries, and to respond appropriately to various duties and missions: implement necessary upgrades to improve anti-ship attack capabilities, including the installation of improved Type-12 surface-to-ship guided missile capabilities (air-to-ship launch type), and enhance network functions

* Other related costs (detailed design, etc.) amount to a separate ¥16.3 billion

Izumo-class destroyer

○ Refurbishment of Izumo-class destroyers (¥6.1 billion)
Procure landing guidance devices

Surface-to-Air Missile (modified)

○ Procurement of Type-03 Medium-Range Surface-to-Air Missile (modified) (1 set: ¥13.7 billion)
In order to strengthen air defense capability, procure the Type-03 Medium-Range SAM (modified) with an enhanced capability to respond to low-altitude and high-speed targets

Base Air Defense SAM (KBSAM)

○ Procurement of Base Air Defense SAM (KBSAM) (Ⓢ¥10.3 billion)
Procure KBSAM for protecting SDF bases from attacks by cruise missiles, etc.

Initiatives Relating to F-X (¥100.1 billion)

○ Development of F-X (¥85.8 billion) (See p. 30)

○ F-X related research (¥14.3 billion)
- Combat support autonomous unmanned aerial vehicle (UAV) concept study (¥10.1 billion) (See p.29)

(2) Stand-off Defense Capability

○ Procurement of F-35A (8 fighters: ¥76.8 billion) (See p. 9)

○ F-15 upgrade (¥52 billion) (See p. 9)

○ F-2 upgrade (2 fighters: ¥3.2 billion) (See p. 15)

○ Development of upgraded Type-12 surface-to-ship guided missile (surface-, ship-, and air-to-ship missile) (¥39.3 billion) (See p. 31)

○ Research on Hyper Velocity Gliding Projectile (HVGP) for defense of remote islands (¥14.5 billion) (p. 31)

(3) Comprehensive Air and Missile Defense Capability

BMD-related budget: ¥137.4 billion
(Of which Ⓢ ¥64.3 billion)

Improvement of Sensor Capability

○ Study on concept of HGV(*) detection and tracking (¥0.3 billion) (See. P. 4)

○ Research on infrared sensor with high sensitivity and broad detection range (¥1.2 billion) (See p. 29)

○ Study on the use of airborne UAVs for missile defense (¥0.1 billion) (See p. 31)

Enhancement of Network Functions

○ Upgrading the Japan Aerospace Defense Ground Environment (JADGE) system (¥1.8 billion) (See p. 13))

Enhancement and Increase of Shooters and Guided Missiles

○ Procurement of Standard Missile-6 (SM-6) (¥20.2 billion)
Acquire SM-6 long-range ship-to-air missiles to be mounted on Aegis-equipped destroyers (Maya-class destroyers) for protection against attacks by aircraft and cruise missiles

○ Procurement of enhanced capability type PAC-3 missiles (PAC-3 MSEs)
(¥60 billion, of which Ⓢ¥44.1 billion)
Procure PAC-3 MSEs capable of both BMD and responding to cruise missiles, and implement reassurance process (*) to secure necessary PAC-3 missiles.
(*) Replacement of parts that are close to the end of their service life and inspection of the whole missile.

○ Modifying SPY-7 (radar for Aegis System Equipped Vessel) to sea-based configuration (¥5.8 billion)
Modify SPY-7 related equipment to be installed on Aegis System Equipped Vessel to a sea-based configuration

○ Research on future railgun (¥6.5 billion) (See p. 29)

○ Research on improvement of capability of Type-03 Medium-Range Surface-to-Air Missile (modified)
(¥0.1 billion) (See p. 31)

○ Procurement of Type-03 Middle-Range Surface-to-Air Missile (modified)
(¥13.7 billion) (See p. 15)

○ Development of surface-to-air missile system for base air defense (KBSAM, modified) and new close-range surface-to-air missile (¥1.8 billion) (See p. 31)

Projectile (common)

Surface-to-air guided missile for base air defense (modified)

New close-range surface-to-air guided missile

(conceptual image)

○ Procurement of Base Air Defense SAM (KBSAM) (Ⓢ¥10.3 billion) (See p.15)

Others

○ BMD exercises
In order to deal effectively with ballistic missiles, conduct BMD exercises to improve BMD capabilities of SDF and Japan-U.S. bilateral response capabilities

BMD exercises (conceptual image)

(4) Maneuvering and Deployment Capability

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

* PFI: Private Finance Initiative

Training of joint transportation using PFI ships

○ Joint exercises for amphibious operations
In order to respond effectively to a variety of situations, conduct joint exercises for amphibious operations to improve tactical skills in amphibious operations

AAV launch from ASDF transport vessel during joint exercises for amphibious operations

○ Procurement of transport aircraft (C-2)
(1 aircraft: Ⓢ¥22.1 billion)
In view of the decreasing number of current transport aircraft (C-1), procure transport aircraft (C-2) that contributes to large-scale deployment by improving flight range and payload

Transport aircraft (C-2)

○ Deployment of troops to Ishigaki Island
Station an Area Security Unit, Medium-Range SAM Unit and SSM to Camp Ishigaki (tentative name) as part of an effort to install units to island areas where SDF presence is lacking

○ Procurement of Type-16 mobile combat vehicles (33 vehicles: ¥23.7 billion)
Strengthen rapid deployment capability of the basic operational units (Rapid Deployment Division and Brigade) by deploying Type-16 mobile combat vehicles suitable for rapid and agile operation in various situations

Type-16 mobile combat vehicle

○ Procurement of new utility helicopter (UH-2)
(13 helicopters: Ⓢ¥25.4 billion)
As the successor to the UH-1J utility helicopter, procure new utility helicopters (UH-2) capable of conducting airborne maneuver and transport and deploying units immediately

New utility helicopter (UH-2)

○ Procurement of transport vessels (2 ships: ¥10.2 billion)
In order to enhance transportation functions to island regions, procure one logistics support vessel (LSV) and one landing craft utility (LCU).

Logistics support vessel (LSV) (conceptual image)

Landing craft utility (LCU) (conceptual image)

○ Development of facilities related to deployment of Area Security Units
in the southwest region (¥16.9 billion, of which Ⓢ¥4.1 billion)
In order to enhance initial response readiness in the defense of remote islands, set up vehicle maintenance facilities related to the deployment of Area Security Units to Ishigaki Island, warehouses, etc. at Camp Miyakojima, and an ammunition depot on Amami Island
(Vice-camp Setouchi).

Key facilities related to deployment of units (conceptual image)

○ Development of facilities related to deployment of Transport Aviation Group
(¥3.0 billion)
Expenses for the final designing and part of the site development work relating to a new site for Camp Saga (tentative name)

Aircraft facilities at Camp Saga (tentative name) (conceptual image)

○ Development of facilities in Sasebo (Sakibe East Area (tentative name)) (¥8.6 billion)
Develop a large-scale wharf and logistical support facilities in the Sakibe East area (tentative name), positioning it as the base for logistical support in the southwest.

Sakibe East area (tentative name) (conceptual image)

○ Rapid deployment training to improve deterrence and response capabilities

- Rapid deployment training by mobile operating units (rapid deployment division/brigade, amphibious rapid deployment brigade) (¥220 million)
Improve the effectiveness of deterrence and response capabilities through rapid deployment of personnel to theaters of operations, engaging across all areas in accordance with plans formulated by Ground Component Command and each regional army.

- Field training making use of favorable training infrastructure in Hokkaido, the U.S. and Australia, etc. (¥860 million)
Deploy personnel to Hokkaido, the U.S. and Australia, which have favorable training environments, to improve tactical skills, enhance cooperation with U.S. and Australian armies, and to improve deterrence and response capabilities

Rapid deployment training to improve deterrence and response capabilities (conceptual image)

(5) Utilization of and Response to UAVs

○ Research on protection against miniature UCAVs (¥0.1 billion)
Research on detection and interception of miniature unmanned combat aerial vehicles by vehicle-based equipment

○ Procurement of UAVs (near-field) (7 vehicles: Ⓢ¥0.5 billion)
Procure UAVs (near-field) capable of contributing to the commander's assessment of the situation and to the demonstration of firepower by gathering information in the air

○ Research on operating miniature UCAVs (¥30 million)
Study the operational requirements of miniature UCAVs, etc., to decide if they should be utilized

UAV (near-field)

○ Test operation of long-endurance UAVs (¥4.7 billion) (See p. 13)

○ Research on miniature ship-based UAVs (performance tests) (¥0.6 billion) (See p. 13)

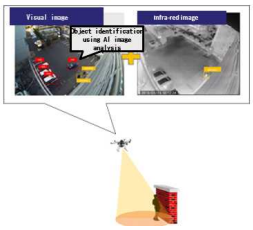
○ Development of unmanned mine clearing systems (¥1.2 billion)
In order to equip FFM with anti-mine warfare capabilities, procure unmanned surface vehicles (USV) as an unmanned mine clearance system that allows for the removal of mines without having to advance into dangerous seas where they have been laid

Unmanned surface vehicle (USV) (conceptual image)

○ Study on the use of airborne UAVs for missile defense (¥100 million) (See p. 31)

○ Research on operational requirements for laser systems in base security (¥10 million)
Engage in hands-on study of the operational requirements for high-energy lasers in base security

○ Trials on the improvement of surveillance capability in base guarding (¥30 million)
Conduct testing on the utilization of AI image identification for base guarding by drones



Trials on the improvement of surveillance capability in base guarding (conceptual image)

3 Strengthening Sustainability and Resiliency

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

(1) Securing Continuous Operations

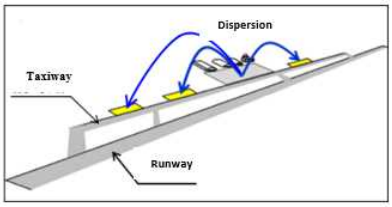
○ Various ammunition necessary for continuity of operations (¥248 billion, of which Ⓢ¥82 billion)

- Procurement of anti-air missiles that contribute to air superiority as well as torpedoes needed to secure maritime superiority (¥35.7 billion, of which Ⓢ ¥ 13.8 billion)
- Procurement of PAC-3 MSEs (¥60 billion, of which Ⓢ¥44.1 billion) (See p. 17)
- Procurement of Standard Missile-6 (SM-6) (¥20.2 billion) (See p. 17)

Anti-air missile (AIM-120 AMRAAM)

○ Maintenance of ammunition depots (¥9.9 billion , of which Ⓢ ¥200 million)

○ Development of dispersion pads (¥1.0 billion)
Development of dispersion pads that allow parked aircraft to be dispersed at air bases to enhance resiliency



Dispersion pads (conceptual image)

○ Procurement of equipment necessary to improve capabilities to restore damaged runways (¥0.24 billion)
Procure equipment which enables faster restoration of damaged runways of airbase.

Equipment for repairing runway damage (conceptual image)

○ Promoting measures to prevent deterioration of SDF facilities and make them resistant to earthquakes (¥69.6 billion, of which Ⓢ¥3.4 billion)
Ensure the SDF's stable operational readiness by renovating SDF facilities fundamental to SDF operations such as office buildings and barracks.

○ Trials on the improvement of surveillance capability in base guarding (¥30 million) (See p. 20)

(2) Promoting Measures Regarding Sustainment and Maintenance of Equipment

○ Ensure necessary expenses for sustainment and maintenance of equipment (¥1,142.4 billion, of which Ⓢ¥49.6 billion)
(including expenses relating to ensuring the mobility of equipment totaling ¥823.4 billion, of which Ⓢ ¥45.8 billion)

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

(*PBL)
Rather than contracting on a case-by-case basis for necessary repairs and procurement of components, the contracts are focused on results of service, such as reduction of repair time and availability of inventory with a comprehensive basis for a defined period.

○ PBL contract for MSDF transport aircraft (C-130R) (¥12.8 billion)
Expand the number of parts subject to the PBL contract, which has been in place since FY2017.

Transport aircraft (C-130R)

○ Study and analysis towards introduction of PBL (¥0.1 billion)
Implement study and analysis towards the introduction of PBL contracts for maintenance of gas turbine engines and non-penetrating periscopes for MSDF ships.

Hyuga-class destroyer

III Priorities in Strengthening Core Elements of Defense Capability

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

1 Reinforcing Human Resource Base

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

Enhancement of Recruitment Programs

Recruitment advertising video

○ Recruitment advertising videos (¥0.2 billion)
Promote recruitment advertisement targeting potential applicants and their parents, by creating appealing recruitment videos that can be popular on social media, and by utilizing advertising banners.


Web seminar (conceptual image

○ Holding web seminars (¥4 million)
By adding new content targeting people looking to change jobs, to the web seminars for new graduates conducted from the previous fiscal year, this aims to create new layers of applicants and secure a stable supply of human resources

○ Enhancing cooperation with university career centers (¥0.2 million)
Strengthen relationship between the MOD/SDF and university career centers by explaining the attractiveness of the SDF as a career to university career center staff; provide career information to students using the career centers.

○ Strengthening cooperation with local governments and enhancing PR to prospective recruits (¥9 million)
In order to secure personnel, provide explanations to local governments and enhance activities of public relations officers, etc.


Garrison training for persons who passed the recruitment exam


Provincial Cooperation Officer provides explanations to local government

Enhancement of Re-employment Support Programs

○ Financial support for higher education for the uniformed SDF personnel in fixed term system after completing tenure (¥3 million)
In order to maintain and increase the number of fixed-term, reserve, and ready reserve personnel, provide a scholarship to uniformed SDF personnel in fixed term system who enter university in Japan after completing their tenure, upon the condition that they serve as reserve or ready reserve personnel while in university.

○ Enhancement of disaster management education (¥50 million)
Provide disaster risk reduction and disaster management education in order to enhance and strengthen reemployment support for personnel seeking employment in disaster prevention-related organizations of local governments.

Scene from disaster risk reduction/disaster management education

○ Research and review of employment support measures (¥10 million)
In order to improve the quality of reemployment support measures, conduct research and reviews on the points to be focused on the setting of more in-depth, specific objectives

○ Preparation of educational materials to prevent high turnover rates at reemployment locations (¥7 million)
Prepare necessary materials to provide education to SDF personnel who are planning to retire that intends to prevent early turnover after being reemployed. MOD will also prepare necessary materials employment support staff can use to support effective settlement of prospective SDF retirees so they can remain employed and avoid high turnover.

Securing and Developing Personnel Adept in AI Utilization

○ Procurement of support services for policy review and planning for AI utilization (¥40 million)
In order to promote the introduction of AI at the MOD, appoint an advisor on AI introduction and promotion to provide policy planning support for AI introduction and advice that will help to manage the progress of AI utilization projects.

○ Appointment of external experts as part-time staff who are able to provide practical guidance on AI training and data analysis (¥8 million)
Recruit external experts as part-time staff, who have detailed knowledge of data analysis and AI training methods when applying AI.

○ Development of human resources knowledgeable in AI by providing education course on AI training to unit and institute personnel (¥30 million)
Plan basic educational courses on AI and data science and implement integrated training at the MOD, mainly for unit personnel engaged directly in the use and operation of AI.

Others

○ Utilization of external staff to enhance student life at the National Defense Academy (¥7 million)
Necessary expenses to enhance student support structures, including the dispatch of counselors

○ Promotion of countermeasures against harassment of any kind (¥20 million)
- Introduction of professional counseling over the phone for responding to harassment issues
- Holding management training focused on anger management for new managers
- Conducting group education on harassment prevention

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

Further promoting greater engagement of female personnel through expanding recruitment and appointment, while implementing and enhancing measures concerning working style reform and improvement of living and work environment.

Promotion of Further Participation of Female Personnel

○ Development of foundation of education/living/work environment for female uniformed SDF personnel (¥6.1 billion, of which Ⓢ¥300 million)

- Improve sections for female personnel in barracks
- Make renovations to improve living and work environments for female SDF personnel (renovations of lavatory and bathing facilities)
- Improve education infrastructure for female uniformed SDF personnel
- Improve sections for female personnel on ships

After renovation

Improvement of areas for female personnel (Installation of a partition in the guard room sleeping quarters)

Before renovation (men's use)

After renovation (women's use)

○ Mentor training; hiring external counselors for female SDF personnel (¥0.4 billion, of which Ⓢ¥0.2 billion)

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

○ Dispatch personnel to NATO gender(*)-related annual meeting

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

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

Promotion of Working Style Reform

○ Develop working hours management system (¥110 million)

○ Implement study and research relating to the digitalization of administrative documents that will help to facilitate remote work (¥20 million)

○ Improvement of the work environment by promoting a paperless office and space-saving operations to create a better workplace (¥10 million)

Support for Work-Life Balance

○ Improvement of workplace nurseries (¥70 million)
Improve workplace nurseries so that personnel can balance their work with parenting and create a workplace that enables them to concentrate on their duties.
・Provision of supplies in workplace nurseries
・Refurbishment of workplace nursery facilities

Children playing in the garden of the workplace nursery

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

Scene of temporary child-care service drill assuming emergency operations

Implementation of Education and Training for Raising Awareness

○ Participation in seminars, etc., to eliminate conventional mindset about gender roles in the workplace and create a work environment that enables all personnel, including those under time constraint due to child care or nursing care, to make full use of their abilities (¥20 million)

・Conduct seminars for raising awareness, etc.
・Collective training for promoting gender equality, etc.
・Production and distribution of pamphlets featuring roles played by female personnel and supporting for work-life balance, etc.

Scene from a class on returning to work after childcare leave ends

Promotion of Improvements to the Living and Work Environment

○ Construct and maintain SDF facilities and secure equipment and daily necessities to improve living and work environment for SDF personnel, so that they can focus on their duties with high morale
- Constructing and maintaining SDF facilities (¥67.4 billion, of which Ⓢ¥4.3 billion)
- Procurement of fixtures and daily necessities, etc. (¥3.6 billion, of which Ⓢ¥0.1 billion)
- Procurement of uniforms, etc. (¥11.8 billion, of which Ⓢ¥5.5 billion)
- Developing foundation of education/living/work environment for female uniformed SDF personnel (¥6.1 billion, of which Ⓢ¥0.3 billion) (See p. 24)

Enhancing the Meals of SDF Personnel

○ Enhance food-related expenses in line with the review to nutritional intake standards for SDF personnel, including those living on-base or on vessels, etc. (¥37.3 billion)

(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

○ Enhancing international research exchanges
Host international policy simulation meetings with research institutes from the U.S., Australia and Europe, enhancing trust and presence in terms of policy simulations and strengthening inter-organizational cooperation (¥7 million)

Connections UK 2019
Source: Connections UK website

National Defense Academy

○ Maintenance and enhancement of research capability and education standard (¥80 million)
Develop the equipment and materials required for basic defense-related research with an awareness of dual-use technology.

National Defense Medical College

○ Improvement of the management of the National Defense Medical College (¥0.9 billion, of which Ⓢ¥130 million)
As an institution for clinical education for training doctors and nurses who are to become executive and technical SDF officials and as a hub for regional medicine, will install medical equipment necessary to qualitatively and quantitatively secure medical cases necessary for education and research.

○ Strengthen research functions related to defense medicine (¥0.4 billion)
・Enhance research on defense medicine that contributes to the operation of SDF units and education at the National Defense Medical College

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

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

○ Maintenance of a system to confirm response to a call-up (¥10 million)
Maintain a response confirmation system utilizing external services to quickly and accurately confirm the call-up status of SDF Ready Reserve and Reserve Personnel in the event of a disaster.

○ Procurement of uniforms, accoutrements , etc. (¥50 million)
In order to improve the effectiveness of SDF Reserve Personnel, implement procurement of uniforms, accoutrements, as well as containers and shelves to store them.

○ Financial support for higher education for the uniformed SDF personnel in fixed term system after completing tenure (¥3 million) (See p. 23)

(5) Enhancement of Medical Functions

In order to respond to various situations and from the aspect of joint operation, the SDF will strive to enhance measures such as frontline first aid capabilities, the capacity to conduct Damage Control Surgery (DCS) at field medical facilities to control the symptoms of patients, and the capacity to manage patients being sent to the rear. This will strengthen the medical and evacuation posture to seamlessly cover the entire stretch between the frontline and final medical evacuation facilities. The SDF will also establish an efficient and high-quality medical care system through further endeavors including upgrading of SDF hospitals into medical hubs with enhanced functions. Moreover, the SDF will establish foundations for training and education, necessary for improving the capability of battle injury treatment. It will also promote the establishment of necessary posture for international cooperation activities.

○ Strengthen the posture of seamless medical care and evacuation from the frontline to the final medical evacuation destination
- ・Procure equipment for DCS* and post-surgery patient management (¥0.3 billion)
- ・Procure necessary equipment and supply for managing patients during medical evacuation (¥1 million)
- ・Procure individual emergency items for which standards have changed (¥70 million)

*DCS: Damage Control Surgery



Field surgical system (for regional forces)
(left: outside, center: inside, right: during training)

○ Enhancement and strengthening of evacuation hospitals
- Preparatory work associated with the reconstruction of the SDF Fukuoka Hospital (¥20 million)
- Detail design for the reconstruction of the SDF Yokosuka Hospital (¥0.2 billion)

Conceptual image of SDF Fukuoka Hospital after reconstruction

○ Education and training for improving the capability to respond to battle injuries; development of the foundation for such educational training
- Procure educational material for improving first-aid skill (¥40 million)
- Develop personnel for DCS(*) section (¥10 million)

○ Enhance capabilities in response to infectious diseases which can be an international threat
- Procurement and maintenance of various equipment necessary to transfer patients with Ebola hemorrhagic fever (¥40 million)
- Strengthen posture of prevention for severe infectious disease (¥0.2 billion)

○ Countermeasures against infectious diseases including COVID-19
- Measures to prevent the spread of COVID-19 for units deployed overseas (¥0.2 billion)
- Conduct research on other countries' efforts and capabilities to tackle infectious diseases, in order to study ways to enhance SDF medical capabilities (¥2 million)

○ Research on adding emergency armor plating to ambulances (¥0.2 billion) (See p. 31)

2 Reinforcing Defense Technology and Industrial Base

¥317.3 billion

(1) Reinforcing Defense Technology Base

To secure technical superiority in the field of technology that will shape future warfare approaches, promote activities that contribute to the discovery and fostering of innovative and emerging technologies and make concentrated investment for core technology, such as technology in new domains and cutting-edge, game-changing technology including artificial intelligence (AI).

R&D Expenses ¥291.1 billion

Activities Contributing to the Discovery and Fostering of Innovative and Emerging Technologies

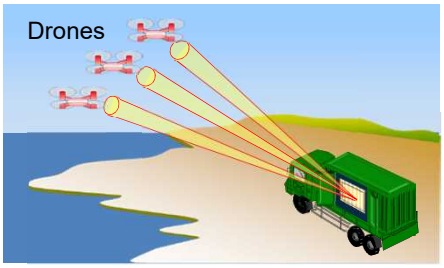
○ Reinforcement of think tank functions for defense technology
In order to effectively discover and foster innovative and emerging technologies such as AI technology, strengthen the implementation structure of the Innovative Technology Research Working Group launched in FY2021

○ "Innovative Science & Technology Initiative for Security" program (¥10.1 billion)
Promote the "Innovative Science & Technology Initiative for Security" program regarding basic research at universities, etc. on innovative and emerging technologies

○ Translational research for advanced technologies (¥0.9 billion)
Conduct translational research to convert innovative and emerging technologies into defense applications

Efforts for Cutting-edge, Game-changing Technology

○ Efforts to facilitate the early practical use of game-changers (¥8.4 billion)
In order to put equipment, etc. into practical use as quickly as possible, conduct research into cutting-edge technologies that could become game changers in parallel with efforts led by the private sector to acquire important related component technologies in a short timeframe.

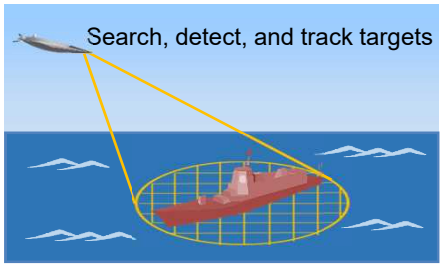


Demonstration of HPM radiation technology (conceptual image)

○ Demonstration of high-power microwave (HPM) radiation technology (¥7.2 billion)
Demonstrate technology related to HPM that can deal with multiple drones

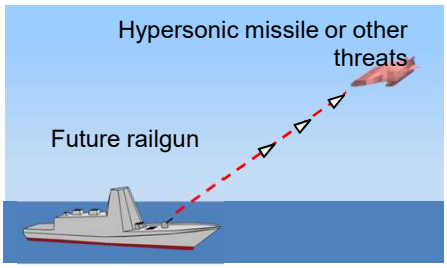
○ Research on high-power laser systems (¥3.9 billion)
Conduct research on high-power laser systems that can respond to air threats instantaneously at low cost

○ Research on Active Radar Seeker* for Hyper Velocity Projectile (¥4 billion)
Conduct research on advanced technology for future guided missiles including hypersonic missiles
*Seeker: A missile component for searching, detecting, and tracking targets



Research on Active Radar Seeker for Hyper Velocity Projectiles, etc. (conceptual image)

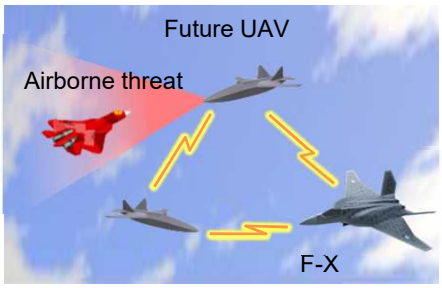
○ Research on future railgun (¥6.5 billion)
Conduct research on future railguns capable of firing hypersonic projectiles with a high fire rate to counter threats such as hypersonic missiles



Research on future railgun (conceptual image)

○ Research on maritime domain awareness modules for unmanned underwater vehicles (UUVs) (¥6 billion)
Conduct research on UUV technology, such as automatic classification of offshore targets based on optical information using AI technology, which is necessary for monitoring and surveillance over the water

○ Combat support autonomous unmanned aerial vehicle (UAV) concept study (¥10.1 billion)
Through simulations that include AI application, derive concepts for the functions, performance, and operational effectiveness of combat support autonomous UAV that will coordinate with manned aircraft such as F-X



Combat support autonomous UAV concept study (conceptual image)

Promotion of Rapid Prototyping of Evolving Cutting-Edge Civilian Technologies

○ Efforts for rapid practical application of new technologies (¥0.8 billion)
Achieve rapid practical application (in approx. three years) of advanced commercial technologies that have a fast innovation cycle, such as AI and augmented reality (AR) technologies, while keeping operational needs in mind

Strengthening Capabilities in Space Domain

○ Research on AI technology for tracking moving targets using satellite constellations (¥0.1 billion)
Conduct research on AI technology that uses satellite constellations to predict the positions for multiple moving targets automatically and in frequent intervals, and makes it possible to keep track of these targets

○ Research on high-sensitivity, broadband infrared detector elements (¥1.2 billion)
Conduct research on high-performance infrared sensors that enable the collection of imagery intelligence from further distances than existing sensors, including the space domain

Strengthening Capabilities in Cyber Domain

○ Research on technologies for dealing with cyber attacks (¥2.4 billion)
Conduct research on technologies that contribute to the improvement of response capabilities in order to prevent damage escalation and continue system operations in the event of a cyberattack on equipment, etc.

Strengthening Capabilities in Electromagnetic Domain

○ Development of stand-off electronic warfare aircraft (¥19 billion)
Develop stand-off electronic warfare aircraft to support SDF air operation by conducting effective communication jamming

Stand-off electronic warfare aircraft (conceptual image)

○ Demonstration of high-power microwave (HPM) radiation technology (¥7.2 billion) (See p. 28)

○ Research on high-energy laser systems (¥3.9 billion) (See p. 28)

○ Research on electronic warfare evaluation technology (¥4.6 billion)
Conduct research on future EW evaluation systems to accurately understand and evaluate the performance of increasingly sophisticated and high-performance electronic warfare devices and the status of equipment under electronic warfare

○ Research on reconnaissance system for MSDF future electronic reconnaissance aircraft (¥1.6 billion)
Conduct research on improving the signal detection, direction finding, and identification capabilities of the aircraft-mounted reconnaissance system towards the development of a successor (future electronic reconnaissance aircraft) to the MSDF's EP-3, which is expected to be decommissioned

Efforts for F-X (¥100.1 billion)

○ Development of F-X (¥85.8 billion)
Steadily promote the development of F-X, designing and manufacturing engines and starting on the basic design of the airframe

○ Research related to F-X (¥14.3 billion)
- Concept study of combat support unmanned aerial vehicles (UAVs) (¥10.1 billion) (See p. 29)

Efforts for Obtaining and Maintaining Maritime Superiority

○ Development of sonar system for future submarines (¥1.3 billion)
Develop sonar system with improved detection capability to ensure and maintain the advantage of the SDF submarines in the underwater domain for the future

○ Research on a noise-reducing torpedo launcher (¥1.7 billion)
Conduct research on technology that reduces the sound of a torpedo launcher to make submarines even quieter

Strengthening of Stand-off Defense Capability

○ Development of upgraded Type-12 surface-to-ship guided missile (surface-, ship-, and air-to-ship missile) (¥39.3 billion)
In addition to the ground-launched type, which has been under development since FY2021, start development of the ship-launched and air-launched types in FY2022

○ Research on Active Radar Seeker for Hyper Velocity Projectile (¥4 billion) (See p. 28)

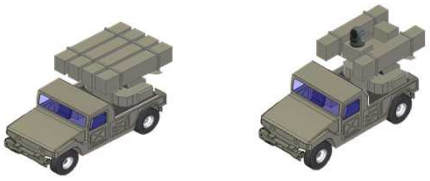
○ Research on Hyper Velocity Gliding Projectile (HVGP) for defense of remote islands (¥14.5 billion)
Conduct research on HVGP which glides at high speed and hit the target with high accuracy aiming for early practical use

○ Research on elemental technologies for new anti-ship guided missiles for defense of remote islands (¥1.4 billion)
Conduct research on longer-range technologies, lower radar cross-section (RCS) technologies, and higher mobility technologies for improved survivability, which are necessary for future anti-ship guided missiles

Strengthening of Comprehensive Air and Missile Defense Capability

○ Development of surface-to-air missile system for base air defense (KBSAM, modified) and new close-range surface-to-air missile (¥1.8 billion)
Efficiently develop the following with a family approach:
a modified version of the ASDF's SAM system for base air defense with improved simultaneous multi-targeting capability and reduced cost, and a new GSDF close-range SAM with better maneuverability and ability to deal with low-altitude targets,

Projectile (common)



Surface-to-air guided missiles for base air defense (modified

New close-range surface- to-air guided missiles

(Conceptual image)

○ Research on future railgun (¥6.5 billion) (See p. 29)

○ Study on the use of airborne UAVs for missile defense (¥100 million)
Conduct research on detecting and tracking hypersonic glide vehicles (HGVs) with airborne UAVs

○ Research on improvement of capability of Type-03 Medium-Range Surface-to-Air Missile (modified) (¥100 million)
Conduct research on retrofitting the Type-03 Medium-Range Surface-to-Air Missile (modified) to provide ballistic missile response capability

Enhancement of Medical Functions

○ Research on adding emergency armor plating to ambulances (¥0.2 billion)
Conduct research on emergency attachment of additional armor to quickly and easily provide protection to unarmored vehicles

Research on adding emergency armor plating to ambulances (conceptual image)

(2) Promoting Optimized Acquisition

In order to further promote effective and efficient procurement of equipment, improve the effectiveness and flexibility of project management throughout the life cycle, conduct more appropriate cost calculation for price estimation of equipment without market prices, and promote more efficient maintenance of equipment and rationalization of FMS procurement.

Improving Project Management Effectiveness and Flexibility throughout the Life Cycle

○ Qualitative improvement of project management (¥40 million)
Consider the introduction of new management methods that contribute to improving the quality of project management by studying advanced cases of project management

○ Improvement of estimation of life cycle costs, etc. (¥300 million)
Design a system that contributes to strengthening project management for estimating life cycle costs and tracking progress with cost schedules

Efforts for More Appropriate Cost Calculation

○ In order to promote appropriate and efficient procurement, reinforce the framework for the implementation of professional training in the acquisition field and the planning of new policies

Streamlining Sustainment of Equipment

○ Promotion of PBL (Performance Based Logistics)

- PBL contract for MSDF transport aircraft (C-130R) (¥12.8 billion) (See p. 21)

Transport aircraft (C-130R)

Rationalization of FMS Procurement

○ Implementation management of FMS procurement (¥60 million)
Promote efforts to rationalize FMS procurement, including continuing to manage the implementation of FMS procurement in the U.S. and accelerating work to grasp the status of late delivery and late case closure and resolve reconciliation issues that cause late delivery

(3) Strengthening Defense Industrial Base

In order to strengthen Japan's defense industrial base, which is an essential foundation for production, operation, and maintenance of equipment, MOD/SDF will strengthen risk management of the equipment supply chain in cooperation and coordination with the industry, and also promote support measures to enable Japanese companies to further participate in the maintenance of U.S. Forces' equipment. In addition, the government as a whole will promote appropriate overseas transfer of defense equipment, and at the same time, strengthen technology management to prevent the outflow of the equipment's core technologies during overseas transfers. Furthermore, MOD/SDF will enhance the information security measures of Japan's defense industry as well as promoting digital transformation (DX) in the industry.

Institutional Reinforcement to Promote Strengthening of the Industrial Base

○ Newly establish the "Defense Industrial Policy Office (tentative name)" in ATLA's Equipment Policy Division with the aim of promoting further collaboration with the defense industry and accelerating the reinforcement of the defense industrial base

Maintenance and Strengthening of Supply Chain

○ Support for companies to maintain and strengthen defense industrial base

- Establish a support system to improve the defense equipment manufacturing process (¥600 million)
- Support companies' smooth business succession in the case of their withdrawal from the defense business (¥80 million)

○ Discover and utilize the technological capabilities of small- and medium-sized enterprises (SMEs) with advanced technologies

- Organize exhibitions for matching between the MOD/SDF and defense prime companies, and study the possibility of applying advanced technologies to defense equipment (¥200 million)

Promotion of Japanese Companies' Participation in Maintenance of U.S. Forces' Equipment

○ Support for companies to participate in maintenance projects of the U.S. Armed Forces' equipment

- Establish a one-stop consultation service in which Japanese companies can receive advice from experts on issues related to participating in maintenance projects of the U.S. Forces (e.g., knowledge regarding U.S. laws and regulations) (¥400 million)
- Develop a system which enables Japanese companies to receive supports from experienced U.S. prime companies on building business structures to participate in the global supply chain (¥100 million)

○ Expand the common maintenance platform for Ospreys of Japan and the U.S. (¥6.8 billion)
Continue construction of new hangars for the Planned Maintenance Interval (PMI) for Ospreys of Japan and the U.S. at GSDF Camp Kisarazu

Osprey (V-22)

Promotion of Appropriate Overseas Transfer of Equipment

◯ Efforts related to defense equipment and technology cooperation to promote the overseas transfer of defense articles

- Conduct Feasibility Studies to grasp the potential needs of target countries and to carry out activities for proposals with the private sector (¥200 million)
- Participate in international defense equipment exhibitions to display defense equipment developed in Japan and superior technology possessed by its SMEs (¥300 million)
- Provide educational support, etc., for equipment maintenance, making use of Japan's technological capabilities to contribute to equipment and technology cooperation in Southeast Asian countries (¥200 million)

Practical training by engineers from a Japanese company (conceptual image)

Strengthen technology management to prevent the outflow of core technologies related to equipment

◯ Strengthen the system to evaluate the sensitivity of new technologies in order to properly manage sensitive technologies related to defense equipment

Reinforcement of Measures on Information Security

◯ Create a support system for defense SMEs to improve their cybersecurity capabilities (¥800 million)

◯ Strengthen information security in defense procurement (¥50 million)
In order to ensure there is a highly reliable information protection system in place for the defense industry, implement activities to encourage defense-related companies to management measures outlined in the information security standards newly established by the MOD

Promotion of DX in the Defense Industry

◯ Conduct research to facilitate digital transformation (DX) of defense industry (¥60 million)

◯ Establish a support system to improve the defense equipment manufacturing process (¥900 million) (See p. 33)

3 Enhancing Intelligence Capabilities

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

○ Establish Senior Coordinator for Global Strategic Intelligence (tentative name) in the Defense Intelligence Division, Bureau of Defense Policy
In light of the increasingly complex security environment, establish a new position responsible for collecting and analyzing intelligence regarding the international situation from multiple and cross-cutting perspectives, taking into account the strategic intentions of other countries in their external communications and the impact of “fake news”

○ Enhancement of the Defense Attaché system
Newly dispatch one defense attaché to Canada (end of FY2022: 74 attachés stationed at 49 embassies, 1 mission and 1 delegation)

○ Reinforcement of intelligence collection and analysis capability
Establish necessary arrangements at the Defense Intelligence Headquarters, etc. to enhance capabilities for collecting and analyzing intelligence regarding international military situations and economic security, etc.

○ Procurement of data for image analysis (see p. 5)
Collect information in the region surrounding Japan using various commercial satellites, including optical satellites with high resolution and small satellite constellations that allow frequent imaging

IV Response to Large-Scale Disasters

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

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

○ Promotion of seismic retrofitting and measures against flooding to maintain and enhance functions in preparation for disasters (¥10.8 billion, of which Ⓢ¥0.8 billion)

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

○ SDF Joint Exercise for Rescue (JXR)
Implement the SDF Joint Exercise for Rescue to maintain and 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

Online meeting of MOD disaster response headquarters during JXR

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

Patient airlift during TREX

○ Remote Island Disaster Relief Exercise (RIDEX)
Implement drills to maintain and enhance capabilities to ensure smooth joint disaster response operations in response to sudden large-scale disasters on remote islands

A CH-47 taking off after delivering patients to a transport ship

3 Procurement of Equipment Contributing to Disaster Response

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

Type-07 mobility support bridge (disaster management exercise on passage of fire engines)

○ Procurement of material carrier vehicle (13 sets: Ⓢ¥0.19 billion)
Procure material carrier vehicles to transport debris and sediment generated by disasters in order to expedite restoration activities in the affected areas

Material carrier vehicle (Disaster relief operation [from July 1, 2021 in response to heavy rain)

○ Procurement of Type-18 personal protective equipment (8,500 sets: ¥2.1 billion, of which Ⓢ4,000 sets: ¥1 billion)
Procure Type-18 personal protective equipment to protect SDF personnel from hazardous materials such as chemical agents

○ Procurement of decontamination set (decontamination vehicle) (1 vehicle: ¥110 million)
Procure a decontamination set (decontamination vehicle) to decontaminate areas and facilities contaminated by chemical agents

Decontamination set (decontamination vehicle)

○ Procurement of water purification kit (1 set: ¥110 million)
Acquire water purification kits to ensure a stable supply of drinking water in the event of a disaster, etc.

○ Procurement of lifesaving systems (Ⓢ¥6 million)
Equip each unit with lifesaving systems for swift and effective lifesaving activities in the event of a large-scale disaster

○ Installation of disaster response drones (Ⓢ15 sets: ¥10 million)
Install disaster drones in each unit to quickly collect information in the event of a large-scale disaster

Disaster response drone

○ Procurement of utility helicopters (UH-2) (Ⓢ13 helicopters: ¥25.4 billion; see p. 18)

V Strengthening Japan-U.S. Alliance and Measures for Harmony with Local Communities

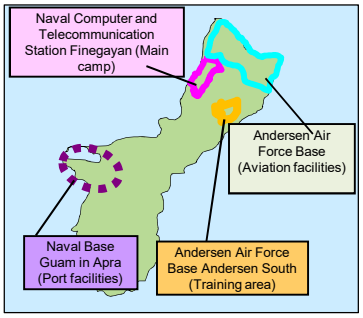
While maintaining the deterrence of the U.S. Forces, Japan will steadily implement specific measures, including the realignment of the U.S. Forces in Japan, to mitigate the impact on local communities such as those in Okinawa.
In addition, Japan will steadily implement measures to promote harmony between defense facilities and surrounding areas, and advance measures to ensure smooth and effective stationing of the U.S. Forces in Japan.

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

¥580.9 billion, of which Ⓢ ¥21.9 billion

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

○ Projects concerning the relocation of the U.S. Marine Corps stationed in Okinawa to Guam (¥18.5 billion)
Construction of Physical Training Complex in Finegayan area, etc.



Guam

Realignment-Related Measures in Japan

○ Project for realignment in Okinawa (¥188.6 billion, of which Ⓢ¥19.3 billion)
- Relocation of Futenma Air Base (¥122 billion, of which Ⓢ¥19 billion)
- Return of land areas south of Kadena Air Base (¥66.6 billion, of which Ⓢ¥0.4 billion)

MCAS Futenma

○ Project for the relocation of the carrier-based aircraft (¥318.3 billion)
Facility development of runways and parking area on Mageshima

○ Project for contingency use (Ⓢ¥2.5 billion)

○ Project for training relocation (¥9.3 billion)

○ Project for smooth implementation of realignment-related measures (¥43.8 billion)

Road opening ceremony associated with partial return of land (near Samashita Gate) of MCAS Futenma, held on 20 December 2020

2 SACO-Related Expenses

¥14.4 billion

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

3 Promotion of Base-Related Measures, etc.

(1) Expenses Related to Measures for Communities around Bases

¥118.3 billion

Expenses for measures to promote harmony between defense facilities and surrounding areas

◯ Implementation of soundproofing projects for residences around air bases, etc. (¥51.4 billion)

◯ Implementation of projects to improve living environment of areas around defense facilities (¥67 billion)

- River and road restoration, soundproofing for schools, development of sand control dams and public welfare facilities, etc.
- Implementation of projects covered by Specified Defense Facilities Environment Improvement Adjustment Grants (development of public facilities and implementation of so-called soft projects such as medical cost subsidies)

[Example of residential soundproofing]

Sand control dam

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

¥216.7 billion (¥205.6 billion on an expenditure base)

Expenses to support smooth and effective operations of U.S. Forces in Japan and to enhance deterrence and response capabilities of the Alliance

◯ Cost sharing based on the new Special Measures Agreement (SMA)* (¥153.7 billion)

Labor cost (¥128.1 billion)
Utilities cost (¥23.4 billion)
Training equipment and materials procurement cost (¥1 billion)
Training relocation cost (¥1.1 billion)

◯ Facilities Improvement Program (FIP) (aircraft shelters, maintenance hangars, etc.) (¥37.8 billion (¥26.7 billion on an expenditure base))

◯ Payment of employer contributions for USFJ local employees' social insurance premiums such as healthcare insurance and pension insurance (¥25.2 billion)

Aircraft shelter

*The Governments of Japan and the United States of America have reached consensus that the new SMA will cover five years, from FY2022 to FY2026, and the average annual cost for Host Nation Support over the period will be ¥211 billion on an expenditure base (see note).

1. Labor cost: Same standard as FY2021 (for 23,178 USFJ local employees)
2. Utilities cost: FY2022: ¥23.4 billion, FY2023: ¥23.4 billion, FY2024: ¥15.1 billion, FY2025: ¥13.3 billion, FY2026: ¥13.3 billion
3. Training equipment and materials procurement cost: The total amount of cost over the new SMA period will be ¥20 billion
4. Training relocation cost: Approximately equal to the budget amount of FY2021
5. FIP: The total amount of FIP funding from FY2022 to FY2026 will be ¥164.1 billion

Note: The actual budget amount will vary depending on wages and allowances based on National Personnel Authority recommendations, etc.

(3) Rents for Facilities, Compensation, etc.

¥153.7 billion

Rents for land areas of defense facilities and compensation for losses in fishers' income due to training on water areas, etc.

VI Strengthening Security Cooperation

Japan will actively leverage the capability of the SDF to work on defense cooperation and exchanges which include bilateral/multilateral exercises, defense equipment and technology cooperation, capacity building and exchanges among military branches to strategically promote multi-faceted and multi-layered security cooperation, based on the vision of "Free and Open Indo-Pacific."

1 Contribution to Stabilization of the Indo-Pacific Region

Promotion of Defense Cooperation and Exchanges

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

Implement capacity building concerning humanitarian assistance/disaster relief (HA/DR), maritime security and cybersecurity, while also promoting sharing of the recognition of international norms

○ Promotion of capacity building in the Indo-Pacific region

- Implement programs to improve capabilities and training of military personnel in Southeast and South Asia and Pacific island countries in fields such as HA/DR and PKO
- Capacity building in collaboration with the U.S., Australia, and other countries

○ Promotion of sharing lessons learned on controlling infectious diseases

Hold seminars and other events for defense authorities to share their experiences with infectious disease control and gain insight from each other, which will contribute to strengthening countries' readiness in fighting infectious diseases

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

Proactively promote the enhancement of defense and security cooperation in the Indo-Pacific region through the ADMM Plus by serving as Co-Chair of the Experts' Working Group on Peacekeeping Operations, etc.

○ Initiatives under the Vientiane Vision 2.0

Based on the Vientiane Vision 2.0, a guideline for Japan-ASEAN defense cooperation, promote practical defense cooperation, which puts emphasis on ensuring the rule of law and strengthening maritime security, through holding seminars with ASEAN member states and other initiatives

○ Participation in Pacific Partnership 2022

By visiting countries in the Indo-Pacific region to provide medical services and conduct cultural exchanges, the Pacific Partnership strengthens partnerships among participating countries and facilitates international peace cooperation activities through cooperation with governments, militaries and other organizations

○ Indo-Pacific Deployment 2022 (IPD22)

Conduct bilateral/multilateral exercise with navies including those from the Indo-Pacific region to improve tactical skills of the JMSDF and promote cooperation with navies of other countries, as well as contribute to regional peace and stability and enhance mutual understanding and confidence-building

○ Multilateral HA/DR Exercise in Micronesia

Conduct training in which aircraft of participating countries drop donated goods into the waters of the Federated States of Micronesia to enhance HA/DR capabilities

Online training on HA/DR

Training military band personnel in Papua New Guinea

ADMM-Plus

Experts' Working Group on Peacekeeping Operations (2021-2023)

IPD

Multilateral HA/DR Exercise in Micronesia

○ Field Exercise with Indian Army in India

Conduct bilateral exercise with the Indian Army, which has actual combat experience in the field of counter-terrorism, to improve tactical skills

Field exercise with Indian Army in India

2 Appropriate Response to Improve Global Security Challenges

International Cooperation with UN and Partners in Areas of Strength

○ Dispatch of instructors to peacekeeping training centers in Africa and other countries

Dispatch SDF personnel as instructors to provide education for UN peacekeeper candidates, mainly to African countries, upon requests from peacekeeping training centers, in order to improve their peacekeeping capabilities to maintain peace and stability of the region

Instructor dispatched to a peacekeeping training center in Africa

○ Conduct disaster response capacity building for the Djibouti Armed Forces

Promote mutual understanding and confidence building with the Republic of Djibouti in strengthening the relationship between the defense authorities of the two countries and contribute to the development and peace of Africa by providing training to build disaster response capabilities of the Djibouti Armed Forces upon a request from the Government of Djibouti

Instruction on the maintenance of engineering equipment for the Djibouti Armed Forces

○ UN Triangular Partnership Programme (UNTPP)

Contribute to the deployment of UN peacekeeping missions by dispatching SDF personnel to provide engineering and medical trainings to UN peacekeeper candidates from Africa, Asia and the surrounding regions

UNTPP

Ensuring Maritime Security

○ Counter-piracy operations off the coast of Somalia and in the Gulf of Aden

Continue counter-piracy operations by a destroyer and P-3Cs off the coast of Somalia and in the Gulf of Aden by participating in Combined Task Force 151, a multinational counter-piracy task unit

Destroyer escorting vessels

Efforts to Ensure the Safety of Japan-Related Vessels

○ Information gathering activities in the Middle East

Conduct information gathering activities by a destroyer and P-3Cs in three waters of high seas: the Gulf of Oman, the northern Arabian Sea and the Gulf of Aden to the east of the Bab el- Mandeb Strait

Enhancement of Capability to Conduct Overseas Activities

○ Participate in multilateral training/exercises

- Cobra Gold

Participate in the multilateral exercise Cobra Gold to maintain and improve the SDF's joint operation capabilities for rescue of Japanese nationals overseas and to increase and enhance cooperation and mutual understanding among participating countries

- Khaan Quest

Dispatch instructor personnel and training units to the multilateral exercise Khaan Quest co-hosted by the Mongolian Armed Forces and the U.S. Pacific Command to develop human resources by improving leadership capabilities and teaching skills in a multilateral environment, and dispatch training units to improve capabilities in UN peacekeeping operations and contribute to confidence building with participating countries

VII Streamlining Initiatives

Based on the NDPG and the MTDP approved in Dec. 2018, various initiatives to further streamline and rationalize defense force development have been promoted, resulting in reduced costs of approximately ¥439 billion.

1 Optimization of Organizational Quotas

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

2 Project Review [Anticipated Reduction: ¥211.7 billion]

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

(Main programs)

- Restoring missile reliability (anticipated reduction: ¥4.6 billion)
  → Partially reuse missiles past their lifespan
- Review of fourth round of scheduled repairs for Type-81 Tan-SAM (anticipated reduction: ¥2.2 billion)
- Study (performance tests) on miniature ship-based UAVs (anticipated reduction: ¥0.7 billion)
  → Improve efficiency outsourcing performance tests to private companies instead of procuring test equipment

3 Standardization and Optimization of Specifications [Anticipated Reduction: ¥97.4 billion]

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

(Example)

- Curb prototype costs by enabling upgraded Type-12 SSM to be fired from the ground, ships, and aircraft (anticipated reduction: ¥16.8 billion)

4 Bulk and Joint Procurement [Anticipated Reduction: ¥12.9 billion]

Pursue cost reduction by bulk purchase of equipment

(Main programs)

- Procurement of 2 engines for transport aircraft (C-2) (anticipated reduction: ¥2.6 billion)

5 Procurement of Equipment and Services Using Long-Term Contracts [Anticipated Reduction: ¥1.9 billion]

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

- PBL contract for transport aircraft (C-130R) (6-year contract) (expected reduction: ¥1.6 billion)
- Procurement of components of transport aircraft (C-2) and other equipment (6-year contract) (expected reduction: ¥0.3 billion)

→Procure several aircraft (expected to be procured in the next MTDP) worth of components for components expected to rise in price in the future, and reduce unit costs (limited to components that are able to be used as spare parts)

6 Cost Scrutiny, etc. [Anticipated Reduction: ¥115.2 billion]

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

(Main programs)

- For the FFM, review and reflect market prices for components, as well as improve skill efficiency to reduce manhours (expected reduction: ¥3.2 billion)

7 Study on Securing Income

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

VIII Others

1 Number of SDF Personnel

● Changes in the number of SDF personnel

(Unit: person)

	End of FY2021	End of FY2022	Change
GSDF	158, 571	158, 481	△90
Regular personnel	150, 590	150, 500	△90
Ready reserve personnel	7, 981	7, 981	0
MSDF	45, 307	45, 293	△14
ASDF	46, 928	46, 994	66
Joint units	1, 552	1, 588	36
JS	385	386	1
Defense Intelligence Headquarters	1, 936	1, 936	0
Internal Bureau	50	50	0
ATLA	406	407	1
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 numbers in parentheses include the number of SDF ready reserve personnel.

● Number of SDF personnel (annual average)

(Unit: person)

	GSDF	MSDF	ASDF
Annual average	140, 867	43, 421	44, 470

● Number of SDF reserve personnel

(Unit: person)

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

● Number of candidates for reserve personnel

(Unit: person)

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

2 Increase in the Number of SDF Personnel

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

(Unit: person)

Categories	GSDF	MSDF	ASDF	Total
Request for Increase	＋３０９	＋３８８	＋３１７	＋１，０１４

Note: In addition to the above, 38 will be transferred to Joint Staff, etc. from the three services. Joint Staff, etc. refers to Joint Staff (JS), joint task units, Defense Intelligence Headquarters (DIH), Internal Bureau (IB), and the Acquisition, Technology, and Logistics Agency (ATLA).

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

FY	FY2017	FY2018	FY2019	FY2020	FY2021
Number of requested personnel	＋３１０	＋７００	＋６６４	＋６４１	＋７１０

3 Increase in the Number of Defense Officials

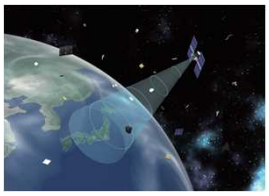
Request increase in the number of defense officials at the MOD in order to improve the structure for joint operations, including in new domains, and to ensure technological superiority in defense, taking into account that the decision by the Prime Minister which directs personnel expenses and organization and quota of staff change request (Directive for organization and allocation of personnel expense in FY2022 to proceed with core issue of the Cabinet [July 7, 2021]) includes development of security arrangement.

Strengthen defense capabilities necessary for joint operations including new domains and for existing domains **(91 personnel)**

○ Increase the number of defense officials in order to buttress the operational system for deterring the outbreak of situations that pose threats to Japan, and improve capability for responding to violations that do not constitute armed attacks

○ Increase the number of defense officials in order to promote projects in the space domain; strengthen the structure of units specializing in the space domain that promote the stable use of space through the Space Situational Awareness (SSA) system, etc.

○ Increase the number of defense officials to strengthen the maintenance structure for destroyers (FFM), etc.



Space affairs (conceptual image)

Defense official engaged in vessel maintenance (conceptual image)

Strengthen Structure for Ensuring Technological Superiority in Defense, including R&D of Advanced Technologies, and Reinforcing the Defense Industrial Base
(90 personnel)

○ Increase the number of defense officials to promote research on autonomous control, decision-making support, and automatic identification, which will lead to the realization of equipment that changes warfare approaches, as well as the application of AI technology to accelerate equipment research

○ Increase the number of defense officials to strengthen posture for systematic research on protection against non-physical attacks such as electromagnetic interference and cyber attacks

○ Increase the number of defense officials to promote reinforcement of the defense industrial base and enhance the company's information security system

○ Increase the number of defense officials who contribute to economic security initiative

Defense officials engaging in cyber security work (conceptual image)

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

○ Increase the number of defense officials to foster defense cooperation and exchanges, including with European countries that have enhanced their engagement in the Indo-Pacific region

○ Increase the number of defense officials to promote projects for the return of land south of Kadena Air Base, including Naha Port Facility

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

Reinforcing Human Resource Base **(11 personnel)**

○ Increase the number of defense officials to strengthen the system for accepting patients with infectious diseases in infectious disease wards and bolster system for promoting work style reform of medical personnel

Nurses working in the medical field (conceptual image)

Increase the Number of Defense Officials to Build Truly Effective Defense Capability **(71 personnel)**

○ Increase the number of defense officials responsible for building a viable defense force through strengthening the disaster response function and the intelligence function, promoting digitalization, and cooperation with local communities

Number of Defense Officials for Improving Work-Life Balance **(23 personnel)**

<Changes in the number of defense officials>

(Unit: person)

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
	13th rationalization plan			14th rationalization plan		
Rationalization	-262	-261	-261	-266	-266	-267
Increase	182	209	204	299	290	330
Net increase and decrease	-80	-52	-57	33	24	63
Decrease due to the arrival of temporary post's deadline, etc.	-7	-15	-12	-12	-21	-19
Number at the end of FY	20,974	20,931	20,903	20,924	20,927	20,971

Note 1: The period of the 14th rationalization plan is from FY2020 to FY2024.
Note 2: Other than that, rationalization of organizational quota by operational reform and request for increase of personnel would take place from FY2020 to FY2022 budget requests (FY2020: 160 personnel, FY2021: 301 personnel, FY2022: 127 personnel).
Note 3: Number at the end of FY includes number for promoting employment of persons with disabilities (FY2018: 24 officials, FY2019: 41 officials), and the increase does not include this number.
Note 4: Does not include the Minister, State Minister, two Parliamentary Vice-Ministers or Senior Advisor to the Minister.

Major Equipment, etc.

Major Equipment

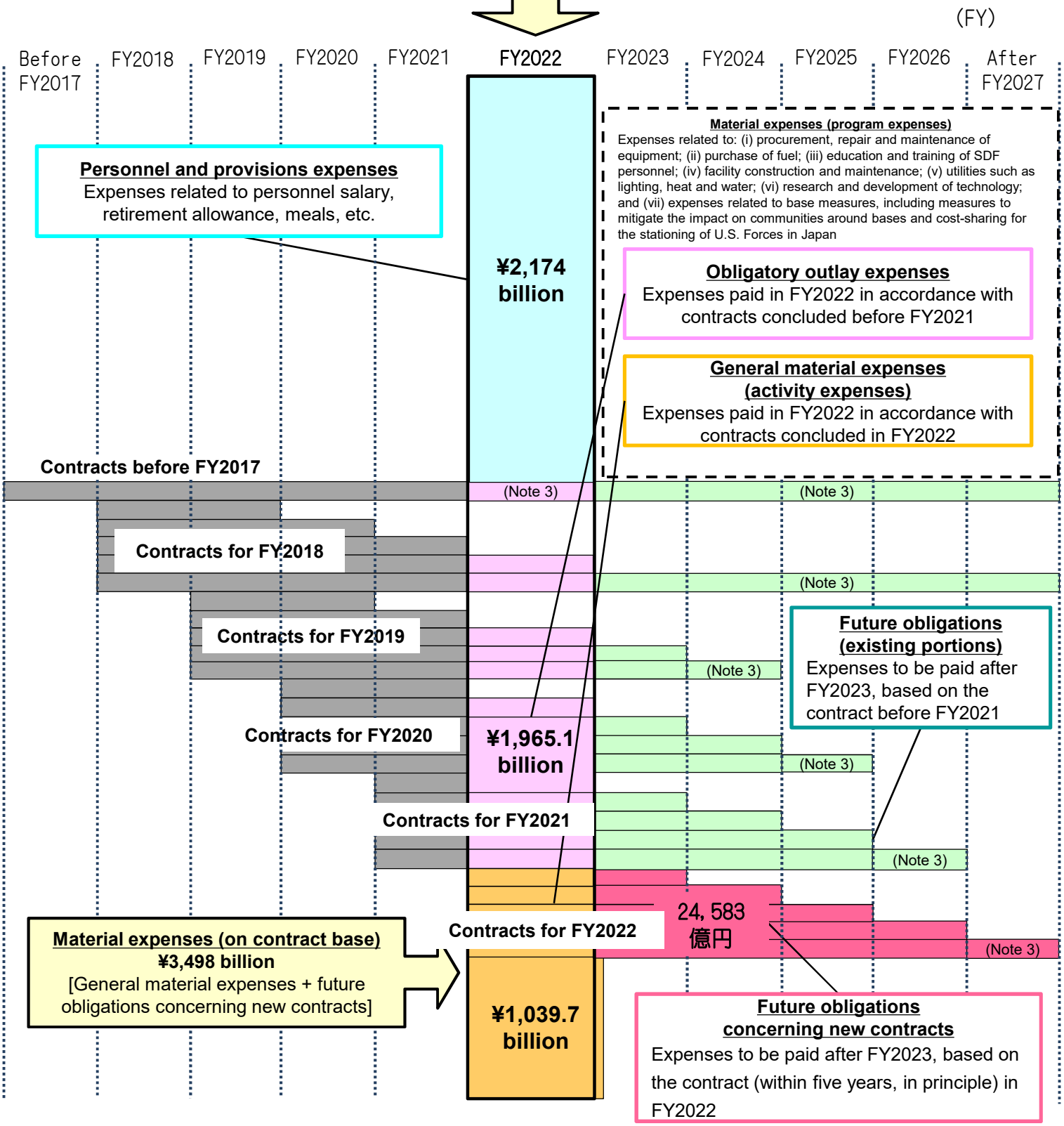
Categories			Number procured in FY2021	FY2021 supplementary budget		FY2022 budget	
				Number procured	Amount (¥100 million)	Number procured	Amount (¥100 million)
Aircraft	GSDF	Utility helicopter (UH-2)	7	13	254	—	—
	MSDF	Fixed-wing patrol aircraft (P-1)	3	3	635 (22)	—	141 (14)
		Search and rescue amphibian (US-2)	1	—	—	—	55 (13)
		Mine sweeping and transport helicopter (MCH-101)	—	—	—	1	61 (29)
		Modification of patrol helicopter (SH-60K) to rescue specification	(1)	—	—	(2)	12
		Improvement of capability of utility aircraft (UP-3D)	(1)	—	—	(1)	57 (10)
	ASDF	Fighter (F-35A)	4	—	—	8	768
		Fighter (F-35B)	2	—	—	4	510
		Improvement of capability of fighters (F-2)	—	—	—	(2)	520
		Transport aircraft (C-2)	(2)	—	—	(2)	32 (163)
		Signals intelligence aircraft (RC-2) (airframe component)	1	1	221 (22)	—	—
Vessel	MSDF	Destroyer	2	—	75 (10)	2	1028 (17)
		Submarine	1	—	—	1	736 (4)
		Mine sweeping vessel	—	—	—	1	134 (1)
		Oceanographic survey vessel	—	—	—	1	279 (1)
		Ocean surveillance ship	—	—	—	1	196 (0.2)
	Shared	Medium class ship (LSV)	—	—	—	1	58
		Small class ship (LCU)	—	—	—	1	44
Guided missile	GSDF	Type-03 middle-range surface-to-air missile (modified)	1 company	components	26	1 company	137
Firearm, vehicle, etc.	GSDF	Type-20 5.56 mm rifle	3,342	—	—	2,928	8
		9 mm pistol SFP9	297	—	—	303	0.3
		60 mm mortar (B)	6	—	—	12	0.5
		120 mm mortar RT	11	—	—	19	9
		Type-19 155 mm self-propelled howitzer	7	—	—	7	44
		Type-10 tank	—	—	—	6	83
		Type-16 mobile combat vehicle	22	—	—	33	237
		Vehicles, communications equipment, facility equipment, etc.	¥31.8 billion	—	114	—	301

Note 1: The procurement amount for FY2021 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 FY2022. (The period for acquiring the item varies by equipment, but can take between two to five years.)
Note 4: The number in parenthesis represents the number related to upgrading the existing commissioned equipment.
Note 5: Price of GSDF guided missiles indicates the amounts excluding procurement cost for ammunition.

Reference

Composition of Defense-Related Expenses

Expenditures: ¥5,178.8 billion
[Personnel and provisions expenses + obligatory outlay expenses + general material expenses]



Note 1: Excludes SACO-related expenses and the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: This chart is a rough diagram. The length of a box does not necessarily correspond to the actual amount of expenses.
Note 3: There are expenses to be paid over 5 years in association with the introduction of long-term contracts for the procurement of equipment.

Details and Classification of Material Expenses

(Unit: ¥100 million)

FY2022	Expenditure base	Contract base
Material expenses	３０，０４８	３４，９８０
Obligatory outlay expenses	１９，６５１	
General material expenses (activity expenses)	１０，３９７	１０，３９７
Future obligations concerning new contracts		２４，５８３

(Note)

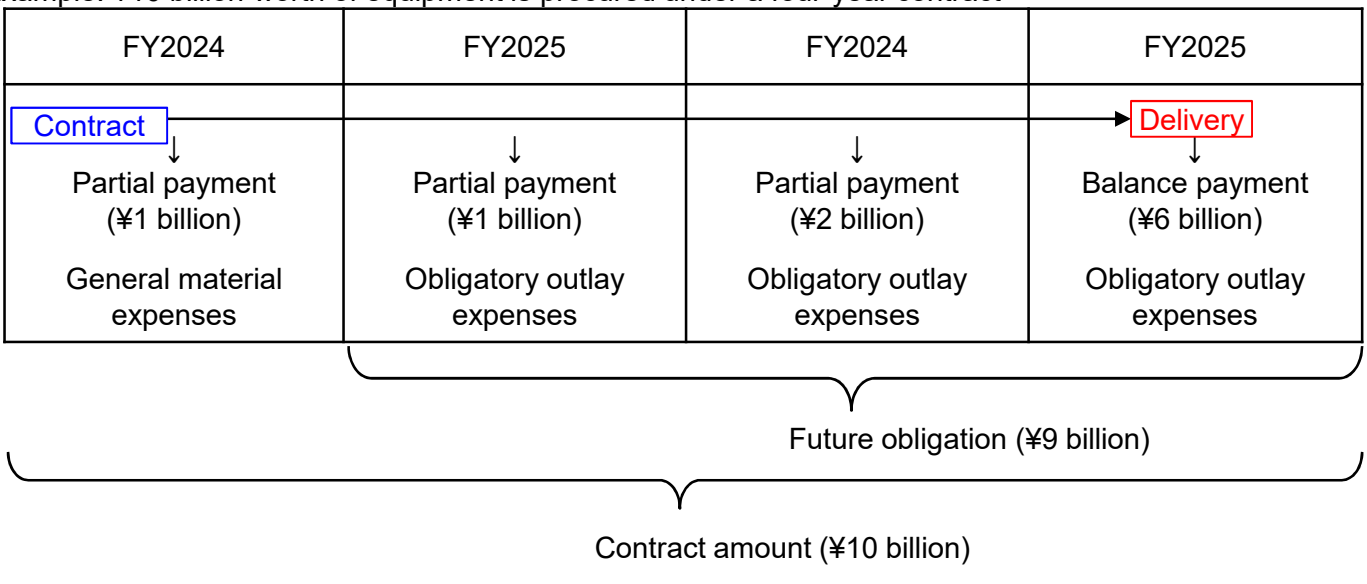
◯Expenditure base: Total amount to be paid in the current fiscal year for projects like procurement of equipment and facility development
Specifically, it is the sum of the expenses to be paid in FY2022 (general material expenses) based on the contracts concluded in FY2022 and the expenses to be paid in FY2022 (obligatory outlay expenses) based on the contracts concluded before FY2021. 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 FY2022 and the expenses to be paid after FY2023 (future obligation concerning new contracts) based on the contracts concluded in FY2022. 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.

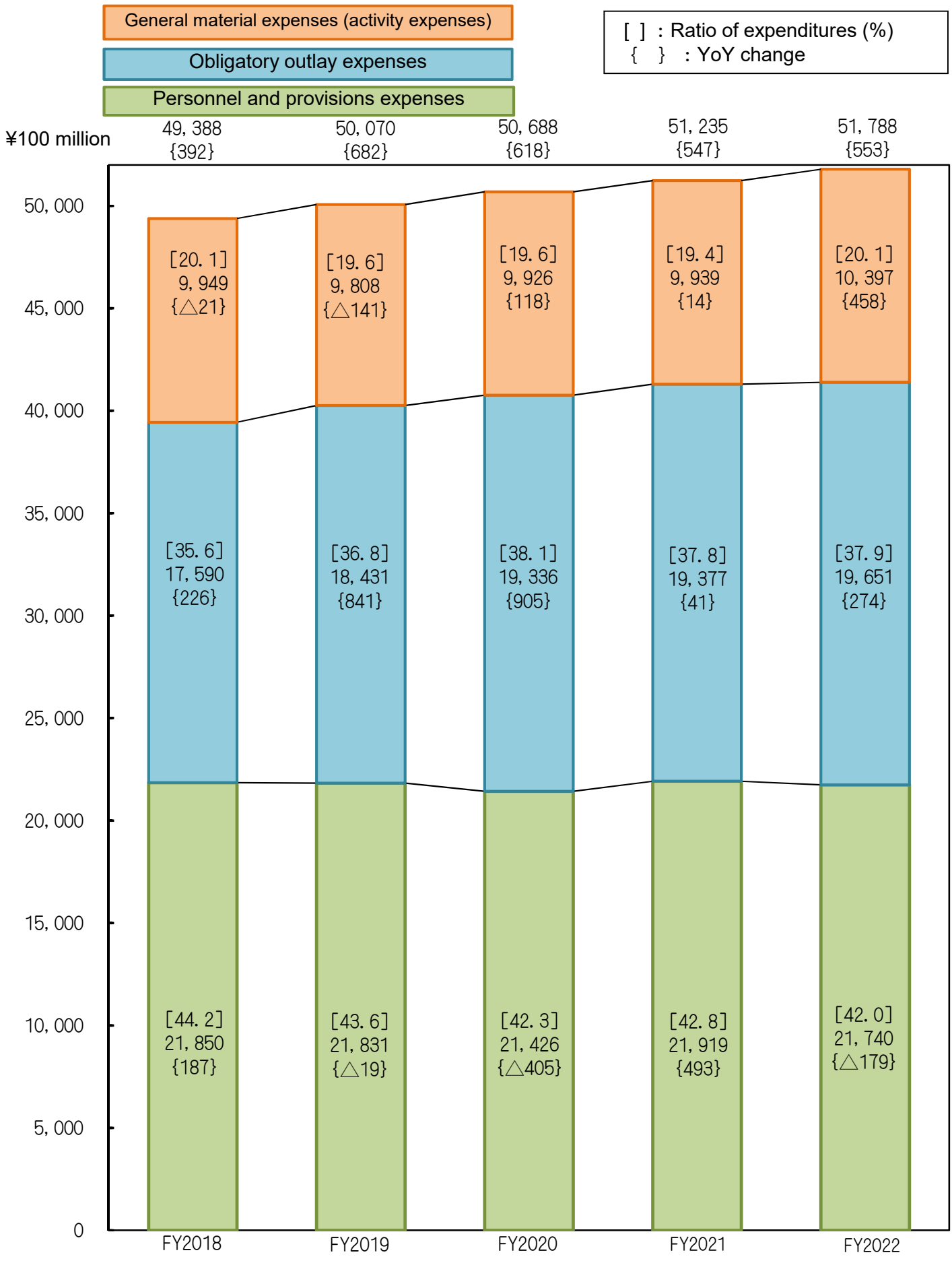
Concept of Future Obligation

The buildup of defense capabilities, such as procurement of major equipment including vessels and aircraft, as well as construction of hangars and accommodations for SDF personnel, can take several fiscal years. For this reason, the MOD enters into contracts for which the span is several fiscal years (up to five years, in principle), and, at the time of concluding the 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(s) following the year a multi-year contract is concluded.

Example: ¥10 billion worth of equipment is procured under a four-year contract

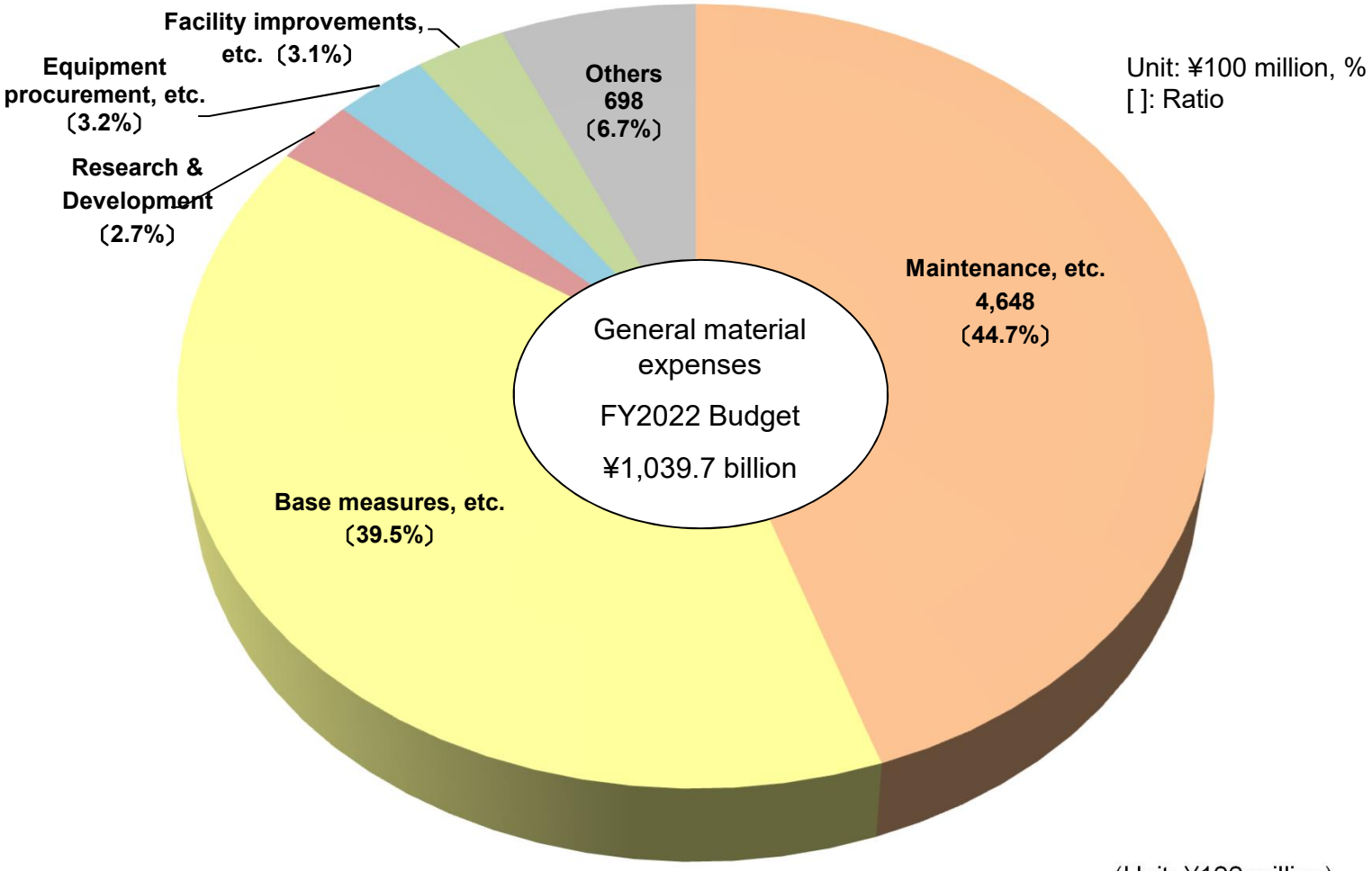


Changes in the Three Categories



Note 1: Excludes SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), and expenses for the three-year emergency measures for disaster prevention/reduction and national resilience.
Note 2: The FY2021 budget includes ¥18.7 billion and the FY2022 budget includes ¥31.8 billion appropriated by the Digital Agency

(Reference) Details of Material Expenses (Program Expenses)



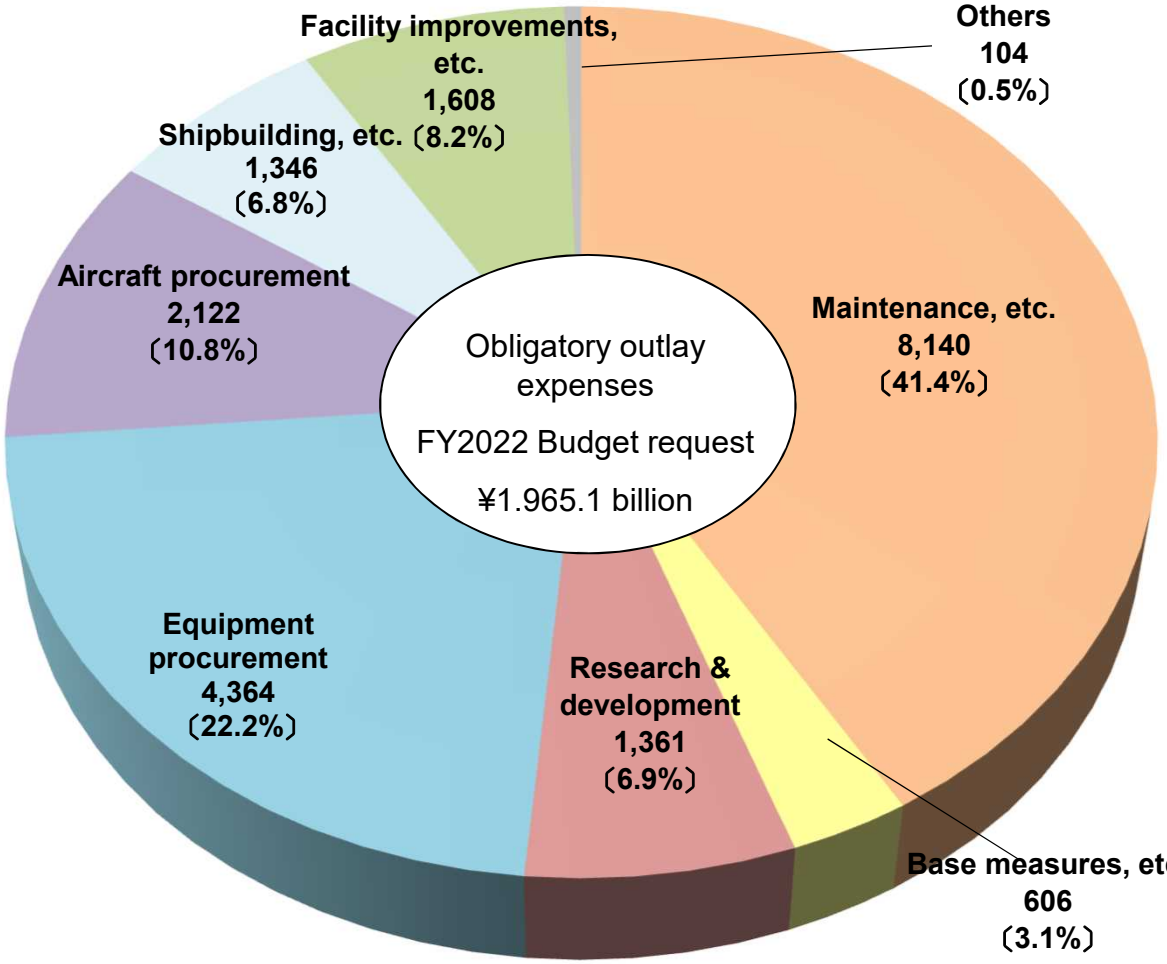
(Unit: ¥100 million)

Item	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F＝D+E)	Comparison with FY2020 supplementary +FY2022 annual (G＝F-C)
Maintenance, etc.	265	4,310	4,575	682	4,648	5,330	755
• Petrol	-	781	781	174	989	1,163	382
• Repair	244	1,988	2,232	386	2,147	2,533	301
• Education & training	-	268	268	2	275	276	8
• Medical care, etc.	0	281	281	30	276	305	24
• Utilities	21	991	1,012	91	960	1,051	39
Base measures, etc.	-	4,046	4,046	-	4,112	4,112	66
• Countermeasures in areas near bases	-	798	798	-	818	818	20
• Host nation support	-	1,839	1,839	-	1,876	1,876	37
• Rent, compensation costs, etc.	-	1,409	1,409	-	1,419	1,419	9
Research & Development	-	267	267	-	283	283	16
Equipment procurement, etc.	185	315	500	1,705	332	2,038	1,538
Facility improvements, etc.	160	355	516	83	324	407	△108
Other (computer rentals, etc.)	-	647	647	9	698	707	60
合　計	610	9,939	10,549	2,480	10,397	12,876	2,327

Note 1: Excludes SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: The FY2020 supplementary budget is the third supplementary budget.
Note 3: The FY2021 budget includes ¥4.9 billion and the FY2022 budget includes ¥12.7 billion appropriated by the Digital Agency.

Details of Obligatory Outlay Expenses

Unit: ¥100 million, %
[ ]: Ratio



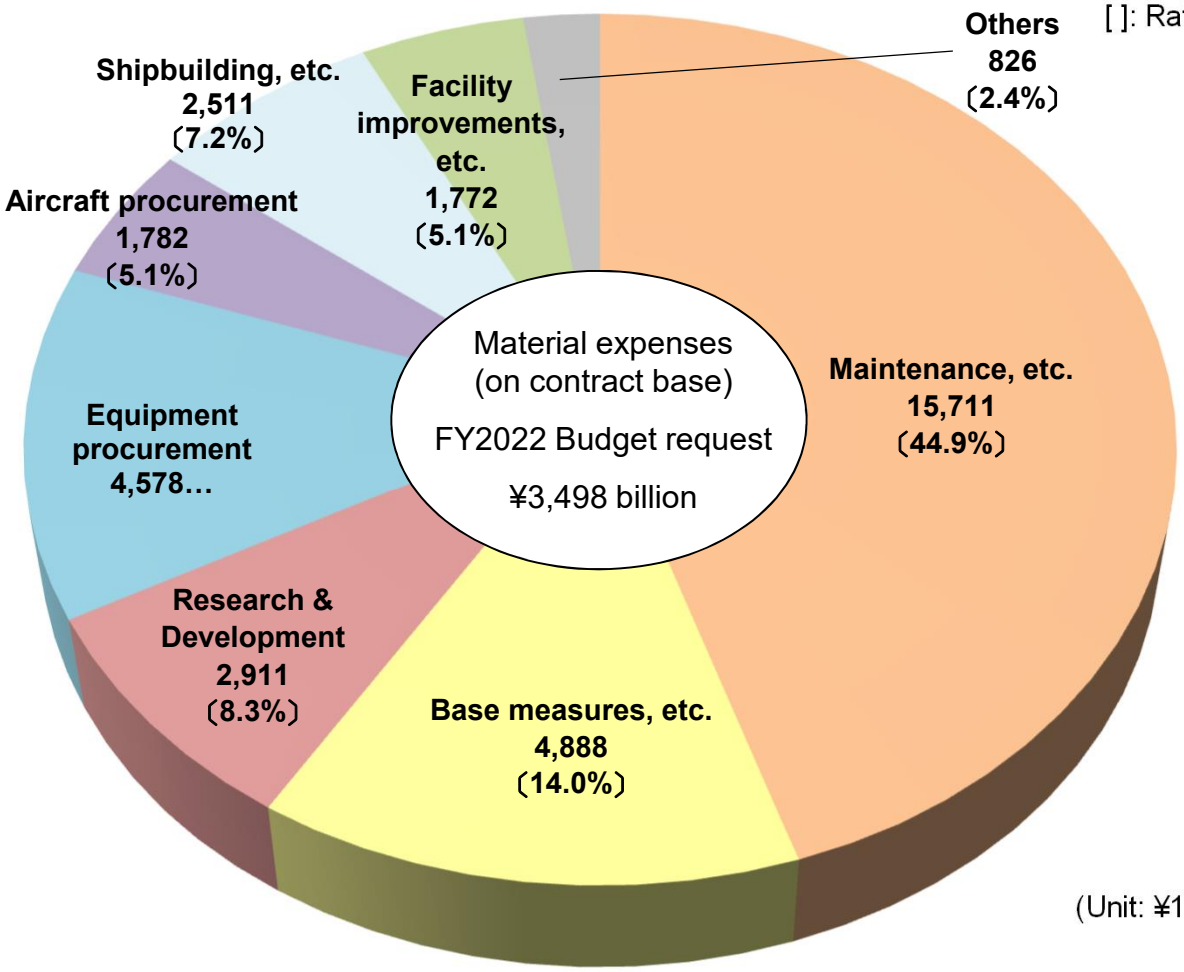
(Unit: ¥100 million)

Item	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F=D+E)	Comparison with FY2020 supplementary +FY2022 annual (G=F-C)
Maintenance, etc.	854	7,299	8,153	1,018	8,140	9,159	1,005
Repair	824	6,936	7,760	1,015	7,903	8,918	1,158
Education & training, etc.	30	364	394	4	237	241	-153
Base measures, etc.	-	572	572	-	606	606	34
Research & Development	-	866	866	-	1,361	1,361	495
Equipment procurement	791	4,797	5,588	1,364	4,364	5,729	141
Aircraft procurement	992	2,988	3,980	1,325	2,122	3,447	-532
Shipbuilding, etc.	620	1,087	1,707	579	1,346	1,925	218
Facility improvements, etc.	-	1,674	1,674	-	1,608	1,608	-66
Other (computer rentals, etc.)	-	94	94	-	104	104	10
Total	3,257	19,377	22,634	4,287	19,651	23,938	1,304

Note 1: Excludes SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: The FY2020 supplementary budget is the third supplementary budget.
Note 3: The FY2021 budget includes ¥13.7 billion and the FY2022 budget includes ¥19.9 billion appropriated by the Digital Agency.

Details of Material Expenses (contract base)

Unit: ¥100 million, %
[ ]: Ratio



(Unit: ¥100 million)

Item	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F＝D+E)	Comparison with FY2020 supplementary +FY2022 annual (G＝F-C)
Maintenance, etc.	313	15,456	15,769	819	15,711	16,530	761
Petrol	-	781	781	174	989	1,163	382
Repair	292	12,679	12,970	523	12,859	13,383	412
Education & training, etc.	21	1,996	2,017	122	1,863	1,985	-32
Base measures, etc.	-	4,678	4,678	-	4,888	4,888	210
Research & Development	-	2,116	2,116	-	2,911	2,911	796
Equipment procurement	185	5,062	5,247	1,225	4,578	5,803	556
Aircraft procurement	-	2,290	2,290	1,236	1,782	3,018	729
Shipbuilding, etc.	-	1,724	1,724	-	2,511	2,511	787
Facility improvements, etc.	160	1,872	2,032	119	1,772	1,891	-141
Other (computer rentals, etc.)	-	833	833	9	826	835	3
Total	658	34,029	34,688	3,408	34,980	38,388	3,700

Note 1: Excludes SACO-related expenses and U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: The FY2020 supplementary budget is the third supplementary budget.
Note 3: The FY2021 budget includes ¥26.6 billion and the FY2022 budget includes ¥30.8 billion appropriated by the Digital Agency.

Breakdown by organization

(Unit: ¥100 million, %)

Category	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budgget (F＝D+E)	Comparison with FY2020 supplementary +FY2022 annual (G＝F-C)	Growth rate from previous year (FY2020 supplementary and FY2021 annual budget) (H＝G/C)
Defense-related expenses	〈658〉 3，867	〈34，029〉 51，235	〈34，688〉 55，102	〈3，408〉 6，873	〈34，980〉 51，788	〈38，388〉 58，661	〈3，700〉 3，559	〈10．7〉 6．5
Ministry of Defense	〈658〉 3，867	〈31，627〉 49，593	〈32，285〉 53，460	〈3，408〉 6，867	〈31，764〉 49，599	〈35，173〉 56，465	〈2，887〉 3，005	〈 8．9〉 5．6
GSDF	〈212〉 874	〈 5，615〉 18，264	〈 5，827〉 19，138	〈 650〉 1，179	〈 5，376〉 17，533	〈 6，026〉 18，712	〈 199〉 △426	〈 3．4〉 △2．2
MSDF	〈113〉 1，180	〈 9，703〉 13，088	〈 9，816〉 14，268	〈1，195〉 2，474	〈 9，997〉 12，922	〈11，192〉 15，397	〈1，375〉 1，128	〈14．0〉 7．9
ASDF	〈287〉 1，766	〈10，126〉 11，237	〈10，413〉 13，004	〈1，528〉 3，167	〈 9，928〉 11，672	〈11，455〉 14，839	〈1，042〉 1，835	〈10．0〉 14．1
Total	〈611〉 3，820	〈25，444〉 42，590	〈26，056〉 46，410	〈3，372〉 6，820	〈25，301〉 42，127	〈28，673〉 48，947	〈2，617〉 2，537	〈10．0〉 5．5
Internal Bureau	- -	〈 4，961〉 5，112	〈 4，961〉 5，112	〈 0〉 10	〈 5，127〉 5，247	〈 5，127〉 5，258	〈 166〉 146	〈 3．3〉 2．9
Joint Staff	〈 34〉 34	〈 452〉 701	〈 486〉 735	〈 25〉 26	〈 512〉 983	〈 537〉 1，008	〈 51〉 274	〈10．5〉 37．2
Defense Intelligence HQ	〈 0〉 0	〈 546〉 763	〈 546〉 763	〈 2〉 2	〈 593〉 786	〈 595〉 788	〈 49〉 25	〈 8．9〉 3．3
National Defense Academy	〈 6〉 6	〈 79〉 151	〈 85〉 157	〈 7〉 7	〈 87〉 176	〈 94〉 182	〈 9〉 26	〈10．0〉 16．3
National Defense Medical College	〈 6〉 6	〈 121〉 245	〈 127〉 252	〈 2〉 2	〈 124〉 241	〈 126〉 243	〈 △1〉 △9	〈△0．6〉 △3．5
NIDS	- -	〈 22〉 25	〈 22〉 25	- -	〈 18〉 31	〈 18〉 31	〈 △4〉 6	〈△16．7〉 24．8
Inspector General's Office of Legal Compliance	- -	〈 3〉 7	〈 3〉 7	- -	〈 4〉 8	〈 4〉 8	〈 0〉 1	〈13．7〉 11．7
Total	〈 47〉 47	〈 6，183〉 7，003	〈 6，229〉 7，050	〈 36〉 47	〈 6，464〉 7，471	〈 6，500〉 7，518	〈 270〉 468	〈 4．3〉 6．6
(Regional Defense Bureau)	- -	〈 36〉 204	〈 36〉 204	- 4	〈 42〉 217	〈 42〉 221	〈 6〉 16	〈15．6〉 8．0
(ATLA)	- -	〈 2，366〉 1，438	〈 2，366〉 1，438	- 2	〈 3，173〉 1，973	〈 3，173〉 1，975	〈 807〉 538	〈34．1〉 37．4

注１：上段〈〉内は物件費（契約ベース）であり、下段は歳出予算である。
注２：ＳＡＣＯ関係経費及び米軍再編関係経費のうち地元負担軽減分に係る経費等を除き、デジタル庁に係る経費を含む。
注３：令和２年度補正予算は３次補正である。

Promotion of Base-Related Measures, etc.

(Unit: ¥100 million, %)

Category	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F＝D+E)	Comparison with FY2020 supplementary +FY2022 annual (G＝F-C)	Growth rate from previous year (FY2020 supplementary and FY2021 annual budget) (H＝G/C)
Promotion of base-related measures, etc.	< －> －	< 4,678> 4,618	< 4,678> 4,618	< －> －	< 4,888> 4,718	< 4,888> 4,718	< 210> 100	< 4.5> 2.2
(1) Expenses related to measures for communities around bases	< －> －	< 1,163> 1,153	< 1,163> 1,153	< －> －	< 1,183> 1,186	< 1,183> 1,186	< 20> 33	< 1.7> 2.9
Residential soundproofing	< －> －	< 513> 522	< 513> 522	< －> －	< 514> 523	< 514> 523	< 1> 1	< 0.2> 0.2
Improving living environment of areas around defense facilities	< －> －	< 650> 630	< 650> 630	< －> －	< 670> 662	< 670> 662	< 19> 32	< 3.0> 5.1
(2) "Host Nation Support (Cost sharing for the stationing of U.S. Forces in Japan)"	< －> －	< 2,017> 2,017	< 2,017> 2,017	< －> －	< 2,167> 2,056	< 2,167> 2,056	< 150> 39	< 7.4> 1.9
Special Measures Agreement	－	1,538	1,538	－	1,537	1,537	△ 2	△ 0.1
Labor cost	－	1,294	1,294	－	1,281	1,281	△ 13	△ 1.0
Utility cost	－	234	234	－	234	234	0	△ 0.1
Training equipment and materials procurement cost	－	－	－	－	10	10	10	New
Training relocation cost	－	10	10	－	11	11	1	5.6
Facilities Improvement Program	< －> －	< 217> 218	< 217> 218	< －> －	< 378> 267	< 378> 267	< 161> 50	< 73.8> 22.8
Measures for USFJ local employees	－	261	261	－	252	252	△ 9	△ 3.4
Rents for facilities, compensation, etc.	< －> －	< 1,497> 1,447	< 1,497> 1,447	< －> －	< 1,537> 1,476	< 1,537> 1,476	< 40> 29	< 2.7> 2.0

Note 1: The above figures are on an expenditure basis (general material expenses + obligatory outlay expenses), and the figures in < > are on a contract basis.

Note 2: The FY2022 budget includes ¥40 million procured by the Digital Agency.

Special Actions Committee on Okinawa (SACO)-Related Expenditures

(Unit: ¥100 million, %)

Category	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F=D+E)	Comparison with FY2020 supplementary +FY2022 annual (G=F-C)	Growth rate from previous year (FY2020 supplementary and FY2021 annual budget) (H=G/C)
1 Project for land return	< —> —	< 33> 33	< 33> 33	< —> —	< 33> 33	< 33> 33	< 10> 0	< 20.7> △ 5.4
2 Project for training improvement	—	15	15	—	16	16	1	6.5
3 Project for smooth implementation of SACO initiatives	< —> —	< 99> 126	< 99> 126	< —> —	< 126> 118	< 126> 118	< 26> △ 8	< 26.5> △ 6.0
Total	< —> —	< 117> 144	< 117> 144	< —> —	< 144> 137	< 144> 137	< 28> △ 7	< 23.8> △ 4.8

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

(Unit: ¥100 million, %)

Category	FY2020 supplementary budget (A)	FY2021 annual budget (B)	FY2020 supplementary + FY2021 annual budget (C=A+B)	FY2021 supplementary budget (D)	FY2022 annual budget (E)	FY2021 supplementary +FY2022 annual budget (F＝D+E)	Comparison with FY2020 supplementary +FY2022 annual (G＝F-C)	Growth rate from previous year (FY2020 supplementary and FY2021 annual budget) (H＝G/C)
1 Project for relocation of U.S. Marine Corps stationed in Okinawa to Guam	－	441	441	－	185	185	△256	△58.1
2 Project for realignment in Okinawa	－ －	1,905 786	1,905 786	193 839	1,692 762	1,886 1,601	△ 20 815	△ 1.0
(1) Relocation of MCAS Futenma	－ －	846 552	846 552	190 803	1,030 355	1,220 1,158	374 606	44.3
(2) Return of land areas south of Kadena Air Base	－ －	1,060 233	1,060 233	4 36	662 406	666 442	△394 209	△37.2 89.6
3 Project for relocation of carrier-based aircraft	－ －	7 31	7 31	－ －	3,183 549	3,183 549	3,176 518	× 489
4 Project for contingency use	－ －	25 264	25 264	25 26	0 67	25 94	1 △170	3.5 △64.5
5 Project for training relocation	－	92	92	－	93	93	1	1.1
6 Project for smooth implementation of realignment-related measures	－ －	461 431	461 431	－ －	438 425	438 425	△ 24 △ 6	△ 5.1 △ 1.4
(1) Realignment Grants	－	48	48	－	41	41	△ 6	△13.5
(2) Measures for areas around bases, etc.	－ －	414 383	414 383	－ －	396 384	396 384	△ 17 1	△ 4.1 0.1
Total	－ －	2,930 2,044	2,930 2,044	219 865	5,590 2,080	5,809 2,945	2,879 902	× 2.0 44.1

FY2021 Supplementary Defense Budget

December 2021
Japan Ministry of Defense

Defense-Strengthening Acceleration Package

In order to enable the acceleration of the enhancement of defense capabilities from FY2021, MOD/SDF will finance necessary projects in not only the FY2022 budget but also FY2021's supplementary budget in order to respond to the current security environment.

- In view of the unprecedented speed at which the security environment around Japan is becoming severe, it is imperative that MOD/SDF **even further accelerate the implementation of various projects** in order to greatly enhance its defense capability.
- In order to ensure citizens' security and peace of mind through guaranteeing national security, **MOD/SDF is moving up projects planned in FY2022 to be implemented instead in FY2021**.
- Under this policy, **MOD/SDF is branding its FY2021 supplementary budget and the FY2022 initial budget the "Defense-Strengthening Acceleration Package"**. **Missile defense capability programs and programs for the reinforcement of defense posture in the southwest islands will be pushed ahead of schedule with the FY2021 supplementary budget**. **The FY2021 supplementary defense budget is the largest one ever, with ¥773.8 billion in obligatory outlay expenses and ¥92.8 billion in future obligations concerning new contracts.**

Note: Raised percentage of advance payment (general material expenses) when moving new projects for FY2022 to the FY2021 supplementary budget.

(Unit: ¥100M)

Categories	FY2021 Budget	FY2022 Budget Request	Year-on-year (YoY) change	FY2021 Supplementary Budget
Expenditures (three categories)				
Defense-related expenses	51,235	54,797	3,562	6,873
Personnel and provisions expenses	21,919	21,881	−37	106
Material expenses	29,316	32,915	3,599	6,767
Obligatory outlay expenses	19,377	22,517	3,140	4,287
General material expenses (activity expenses)	9,939	10,398	459	2,480
Future obligations concerning new contracts (Ⓑ)	24,090	27,963	3,873	928
Material expenses (contract based) (Ⓐ+Ⓑ)	34,029	38,361	4,332	3,408

Note: Besides these expenses, also included in the FY2021 supplementary budget are U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities), which is ¥86.5 billion. Thus, the total comes to ¥773.8 billion.

1. SDF's immediate response to a changing international environment (¥281.8 billion)

(General material expenses: ¥188.9B / Future obligations concerning new contracts: ¥92.8B)

With neighboring countries bolstering their defense capabilities and the security environment surrounding Japan growing increasingly severe at unprecedented pace, MOD/SDF will accelerate the strengthening of its defense capabilities required for missile defense and the protection of southwest islands.

(Reinforcing Comprehensive Air & Missile Defense Capability) (¥97.8 billion)

Accelerate procurement of defense equipment necessary to defend against all kinds of airborne threats that could come to Japan, such as ballistic missiles or cruise missiles

○ Procurement of enhanced capability type PAC-3 missiles, etc. (PAC-3 MSE) (¥44.1 billion)

Procure PAC-3 MSEs capable of responding to both ballistic missiles and cruise missiles, and implement reassurance process* to secure necessary PAC-3 missiles

*: Replacement of parts that are close to the end of their service life and inspection of the whole missile

Patriot system

○ Procurement of components for the surface-to-air missile Patriot system (¥40.3 billion)

Procure parts required for maintenance to ensure stable and continuous operation of the Patriot system

○ Procurement of components for Type-03 middle-range surface-to-air-missile (modified) (¥2.6 billion)

In order to strengthen air defense capability, procure Type-03 medium-range SAM (modified) with enhanced capability of responding to low-altitude, high-speed targets

Base air defense SAM

○ Procurement of base air defense SAM (KBSAM) (¥10.3 billion)

Procure KBSAM to protect SDF bases from cruise missile attacks

(Strengthening Capability in Maritime & Air Domains) (¥82.5 billion)

Accelerate procurement of equipment to strengthen continuous surveillance posture in Japan's surrounding air and maritime regions, including the vast airspace on the Pacific side

○ Procurement of fixed-wing patrol aircraft P-1 and engines (3 aircraft: ¥65.8 billion and 2 engines: ¥1.9 billion)

Procure P-1s and engines as the upgraded successor to the current P-3C fixed wing aircraft

○ Lifespan extension for fixed-wing patrol aircraft (P-3C) (¥1.1 billion)

Apply lifespan extension measures for the P-3C to maintain fixed-wing patrol aircraft system

○ Procurement of Vertical Launch System (VLS) (2 sets: ¥8.4 billion)

Procure VLS for destroyers (FFM)

Fixed-wing patrol aircraft (P-1)

(Bolstering Sustainability & Resiliency) (¥39.5 billion)

Accelerate the procurement of ammunition etc. to ensure continuous operations from peacetime to contingencies

○ Procurement of aircraft ammunition (AAM-4B, AAM-5B) (¥8.4 billion)

Procure medium-range air-to-air missile AAM-4B and short-range air-to-air missile AAM-5B to mount on F-2 and F-15

○ Procurement of Type 12 torpedo, Type 18 torpedo, Type 15 mine, and 07 Vertical Launch ASROC* (¥21.7 billion)

※Anti-Submarine ROCket

○ Procurement of parts to ensure fighter (F-15) mobility (¥2.1 billion)

Procure parts necessary for the maintenance of the F-15, in order to sustain and improve the F-15's mobility rate

(Enhancing Maneuvering and Deployment Capability) (¥61.9 billion)

Acquire rapid and broad transportation and deployment capabilities; accelerate procurement of equipment to improve effective deterrence and response capabilities

○ Procurement of transport aircraft (C-2) and engine (1 aircraft: ¥24.3 billion and 2 engines: ¥8.1 billion)

Procure the C-2, which contributes to large-scale deployment with an improved flight range and payload

○ Procurement of utility helicopters (UH-2) (13 aircraft: ¥25.4 billion)

Procure the UH-2, utility helicopters capable of conducting airborne maneuver/transport and deploying units immediately

○ Construction of barracks for Camp Ishigaki (tentative name) (¥4.1 billion)

Construct barracks for troops and their families, along with installment of units to island areas where SDF presence is lacking

Utility helicopter UH-2

Transport aircraft C-2

2. Ensure stable SDF operations (¥524.9 billion)

(General material expenses: ¥ 31.6B / Obligatory outlay expenses: ¥ 493.4B)

In order to deal with the security environment surrounding Japan, aim to ensure stable SDF operations through on-schedule delivery of defense equipment, etc., and smooth management of defense facilities by reducing burden on local communities

(Ensuring Stable Delivery of Defense Articles) (¥428.7 billion)

Due to the protracted COVID-19 crisis, companies' financial situations have worsened, and the late delivery of defense equipment is a concern. MOD/SDF will strive to reduce the risk of late delivery and ensure stable procurement by paying in advance and lowering interest.

※This also aligns with the defense industry's request that MOD/SDF employ financing measures with more flexibility and effectiveness.

(Improving SDF Life and Work Environment / Enhancing Medical Functions) (¥7.8 billion)

○ Procurement of uniforms (¥6.8 billion)

Procure work clothes, etc., to foster an environment in which SDF personnel can perform their duties with high morale

○ Enhancement of medical functions (¥1 billion)

Procure equipment, such as PCR testing equipment, that will contribute to enhancing the SDF's capability of responding to infectious diseases

※ Besides the above, ¥4.3 billion was booked for strengthening infrastructure: maintenance of SDF facilities to improve living and work environment (maintenance of on-base machinery and equipment; protection of SDF barracks, etc. from deterioration and earthquakes)

Procuring uniforms

Enhancing capabilities for responding to infectious diseases

Maintaining SDF facilities

(Ensuring Smooth Operations of Defense Facilities) (¥86.5 billion)

Steadily implement the realignment of U.S. Forces in order to maintain their deterrence while mitigating the impact on local communities including Okinawa

○ Construction of the Futenma Replacement Facility (FRF) (¥80.1 billion)

○ Return of land areas south of Kadena AB (¥3.6 billion)
Development of facilities and areas to which existing facilities and areas will be relocated due to their return

○ Facility Improvements for contingency use at Nyutabaru and Tsuiki ABs (¥2.6 billion)
Improvements of taxiways, parking areas, and runways

Construction of the FRF (current status)

(Others)

○ Disposal of PFOS-tainted water in water tanks for foam fire extinguishing (¥1.9 billion)

Facility improvements for contingency use (current status)

3. Strengthen the SDF's Disaster Response Capabilities and Reinforcing Infrastructure (¥21.6 billion)

(General material expenses: ¥21.6B)

Bolster the SDF's defense response capabilities; strengthen the infrastructure base through the renovation of old barracks, etc., in response to the damage from heavy rain

(Strengthening Disaster Response Capabilities) (¥12.6 billion)

Further improve the SDF's response capabilities, taking into account the important roles response capabilities such as transportation play in responding to various disasters

○ Procurement of trucks (¥7.2 billion)

Procure vehicles necessary for transporting troops to search and rescue operations, delivering water and materials critical in livelihood support, and removing disaster debris

Vehicles responding to disasters

○ Procurement of Type-18 personal protective equipment (¥1 billion)

Procure Type-18 personal protective equipment to protect SDF personnel when dealing with extraordinary disasters or CBRN terrorism

○ Procurement of disaster response drones (¥10 million)

Procure all-weather type disaster response drones for the ground reconnaissance teams of JGSDF divisions and brigades

Type-18
personal protective equipment

All-weather
disaster response drones

(Reinforcing SDF Infrastructure) (¥9 billion)

Ensure continuous troop operation in the event of disasters by reinforcing SDF infrastructure through various means, such as renovating barracks that lack earthquake resistance or are antiquated

○ Restoration of disaster prevention facilities on base (¥2.5 billion)

Renovate SDF facilities that were affected by the heavy rainfall in July and August 2021

○ Maintenance of on-base machinery and equipment, etc. (¥1.5 billion)

Maintain boilers, air conditioning, generator rooms, etc.

○ Protection of SDF barracks, etc. from deterioration and earthquakes (¥2.8 billion)

Take measures for quake-proofing and preventing deterioration of facilities fundamental to SDF

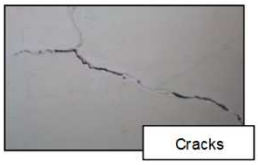
○ Maintenance of antiquated ammunition depots, etc. (¥1 billion)

A collapsed slope

Rusty inner pipes

Barracks before renovation

After renovation



Measures for quake-proofing and preventing deterioration of barracks, etc.

④Others (¥38.4 billion) (Personnel and provisions expenses: ¥10.6B / General material expenses: ¥27.8B)

Expenses necessary for counter-piracy operations and management of SDF hospitals including mass vaccination center services, and increased fuel costs because of the price hike in crude oil

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(Reference) *Tentative translations

○ On setting out a new economic policy (Prime Minister's instructions) (excerpt) (October 8, 2021)

…Fourthly, ensuring citizens' safety and peace of mind. Keeping in mind the damage from this summer's heavy rainfall, I will swiftly and flexibly promote the prevention and reduction of disasters and enhancement of national resilience. In addition, I will ensure national security by responding accurately to the changing international situation.

○ "Economic measures to overcome new coronavirus infections and to carve out a new era" (excerpt) (November 19, 2021)

IV. Key points for ensuring safety and peace of mind, including measures to prevent and reduce disasters and to enhance national resilience

1. Promotion of measures to prevent and reduce disasters and to enhance national resilience

(…)

・Strengthen the SDF's Disaster Response Capabilities and Reinforcing Infrastructure (MOD)

(…)

3. Safety and security of the people, including by ensuring national security

With neighboring countries bolstering their defense capabilities and the security environment surrounding Japan growing increasingly severe at unprecedented pace, in order to respond rapidly to the changing international situation, and effectively ensure national security, MOD/SDF will, while keeping in mind the strengthening of research and development, accelerate the strengthening of its defense capabilities required for missile defense and the protection of southwest islands.

(…)

・ Immediate response of the SDF to the changing international situation (MOD)

・ Ensure stable SDF operations (MOD)

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防衛省
MINISTRY OF DEFENSE

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Defense Programs and Budget of Japan

Overview of FY2022 Budget (Including FY2021 Supplementary Budget)

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