防衛省

Ministry of Defense

Defense Programs and Budget of Japan

Overview of FY2017 Budget Bill

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Defense Programs and Budget of Japan

Overview of FY2017 Budget

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Concept of FY2017 Budget

1. Japan will steadily improve its defense capabilities during FY2017, as the fourth fiscal year of this effort, in order to develop the Dynamic Joint Defense Force according to the "National Defense Program Guidelines for FY2014 and beyond" (approved by the Cabinet on December 17, 2013) and the "Medium Term Defense Program (FY2014-FY2018)" (approved by the Cabinet on December 17, 2013).

2. Japan will build up its defense capabilities while focusing on the further enhancement of joint functions in order to seamlessly and dynamically fulfill its defense responsibilities, which include providing effective deterrence and response to a variety of security situations, supporting stability in the Asia-Pacific region, and also improving the global security environment. Japan will place particular emphasis on the following measures: intelligence, surveillance, and reconnaissance (ISR) capabilities; intelligence capabilities; transport capabilities; command, control, communication, intelligence (C3I) capabilities; response to attacks on remote islands; response to ballistic missile attacks; response to outer space and cyberspace threats; response to large-scale disasters, etc.; and international peace cooperation efforts, etc. At the same time, Japan will give consideration to ensuring technological superiority and maintaining defense production and the technological bases.

3. In light of the increasingly severe fiscal situations, Japan will further promote efforts to achieve greater efficiency and streamlining that is in harmony with other national policies through initiatives such as long-term contracts.

Ⅰ Overall defense-related expenditures

【Expenditures (classified into three categories)】 (Unit: ¥100 million)

	FY2016 Budget	YR/YR	FY2017 Budget	YR/YR
Defense-related expenditures	48,607 (50,541)	386[0.8] (740[1.5])	48,996 (51,251)	389[0.8] (710[1.4])
Personnel and provisions expenses	21,473	351[1.7]	21,662	190[0.9]
Material expenses	27,135 (29,069)	34[0.1] (389[1.4])	27,334 (29,589)	199[0.7] (520[1.8])
Obligatory outlay expenses	17,187 (18,377)	5[0.0] (118[0.6])	17,364 (18,767)	177[1.0] (390[2.1])
General material expenses (activity expenses)	9,948 (10,692)	30[0.3] (271[2.6])	9,970 (10,822)	22[0.2] (131[1.2])

(Note)
1. [ ] : growth rate (%)
2. Figures may not add up to the total due to rounding (the same hereinafter)
3. The upper figures in each cell do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new government aircraft. The lower number in parentheses indicates the expenses which include those above.
   The amount of the SACO-related expenses are:
   FY2016: ¥2.8 billion; FY2017: ¥2.8 billion
   The U.S. Forces realignment-related expenses (the portion allocated for reducing the burden on local communities) are:
   FY2016: ¥176.6 billion; FY2017: ¥201.1 billion
   Expenses related to the introduction of new dedicated government aircraft are:
   FY2016: ¥14.0 billion; FY2017: ¥21.6 billion.
4. Exchange rate for FY2017 defense budget request: US$ = JPY110

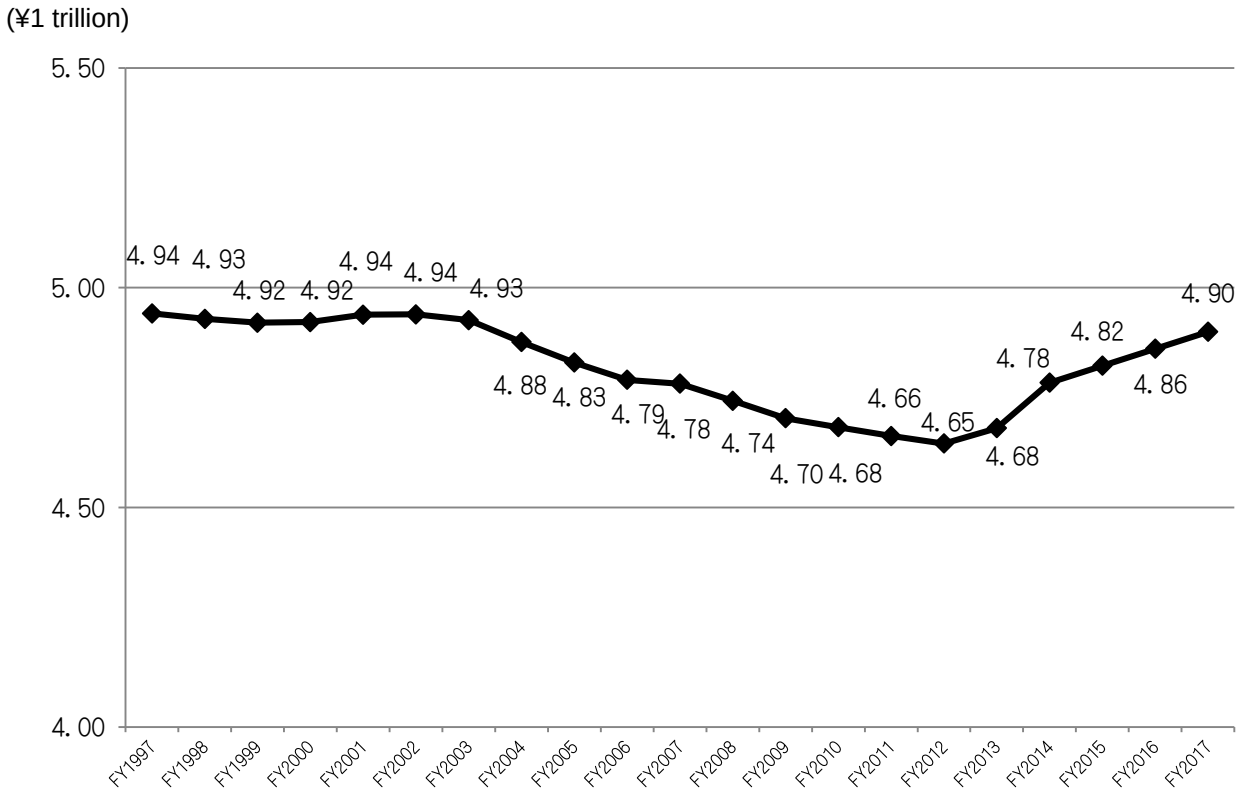
【Future obligation concerning new contracts] (Unit: ¥100 million)

	FY2016 Budget	YR/YR	FY2017 budget	YR/YR
Total	20,800 (22,875)	△2,198[△9.6] (△2,749[△10.7])	19,700 (21,299)	△1,100[△5.3] (△1,576[△6.9])
Conventional portion	19,681	66[0.3]	19,147	△534[△2.7]
Long-term contracts	1,119	△2,265[△66.9]	554	△565[△50.5]

(Note)
1. [ ] : growth rate (%)
2. The upper figures in each cell do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft. The lower number in parentheses indicates the expenses which include those above.
   The amount of the SACO-related expenses are:
   FY2016: ¥1.0 billion; FY2017: ¥1.8 billion
   The U.S. Forces realignment-related expenses (the portion allocated for reducing the burden on local communities) are:
   FY2016: ¥204.3 billion; FY2017: ¥157.8
   The expenses related to the introduction of new government aircraft are:
   FY2016: ¥2.2 billion; FY2017: ¥200 million.
3. Details of long-term contract in FY2016: Patrol helicopter (SH-60K) X 17 aircraft ¥102.0 billion
   Performance Based Logistics (PBL) of Special transport helicopter (EC-225LP) ¥4.3 billion
   Performance Based Logistics (PBL) of Training helicopter (TH-135) ¥5.6 billion
   FY2017: Helicopter (CH-47JA) X 6 aircraft ¥44.5 billion
   Performance Based Logistics (PBL) of Transport aircraft (C-130R) ¥10.9 billion

(Reference) Changes in defense-related expenditures

Changes in total amount



Transition of the growth rate

	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003
growth rate	2.0	△0.3	△0.2	0.0	0.3	0.0	△0.3

	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
growth rate	△1.0	△1.0	△0.8	△0.2	△0.8	△0.8	△0.4

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
growth rate	△0.4	△0.4	0.8	2.2	0.8	0.8	0.8

Notes: 1. The above figures are on an expenditure base.
2. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.

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

Ⅱ Effective deterrence and response to various situations

In order to provide effective deterrence and respond to a variety of security situations, Japan will build up necessary defense capabilities to ensure security of the seas and airspace surrounding Japan, respond to attacks on remote islands, respond to ballistic missile attacks, respond to outer space and cyberspace threats, respond to large-scale disasters, and strengthen intelligence capabilities.

1 Ensuring security of seas and airspace surrounding Japan

Strengthen intelligence, warning and surveillance capabilities in the seas and airspace surrounding Japan, in order to carry out continuous surveillance across wide areas and detect various warning signs at an early time

○ Capability improvement for fixed-wing patrol aircraft (P-3C) (¥500 million)
Implement upgrade necessary to improve capabilities of radars in order to improve the detection/discernment capabilities of fixed-wing patrol aircraft (P-3C)


Fixed-wing patrol aircraft (P-3C)

○ Life extension of fixed-wing patrol aircraft (P-3C) (3 aircraft: ¥1.8 billion)
Implement life extension measures for P-3C to maintain the number of fixed-wing patrol aircraft


Patrol helicopter (SH-60K)

○ Life extension of patrol helicopters (4 helicopters: ¥4.7 billion)
Implement life extension measures for two SH-60Ks and two SH-60Js to maintain the number of patrol helicopters

○ Life extension of imagery intelligence gathering aircraft (OP-3C) (1 aircraft: ¥700 million)
Implement life extension measures for one OP-3C to maintain the number of imagery intelligence gathering aircraft


Imagery intelligence gathering aircraft (OP-3C)

○ Capability Improvement of Airborne Warning And Control System (AWACS) (E-767) (2 aircraft: ¥22 billion)
Implement conversion of central computing devices and installation and upgrade of electronic warfare support measures in order to improve the warning and surveillance capabilities of the existing E-767


Airborne Warning And Control System (AWACS) (E-767)

○ Acquisition of Unmanned Aerial Vehicles (RQ-4B Global Hawk) (¥16.8 billion)

- Allocate expenses for the assembly of one UAV (RQ-4B Global Hawk) in order to enhance persistent wide-area surveillance capability
- Strengthen preparation and readiness for the introduction of UAVs

* Separately allocate ¥1.9 billion for other related expenses (support equipment, etc.)

The FY2015 and FY2016 budgets were used to acquire aircraft components (for 3 vehicles) and ground element for remote control operation.

[FY2017/Mid-Term Defense Program: 1 aircraft/ 3 aircraft]

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

○ Life extension of destroyers (life extension work for 5 destroyers and parts procurement for 4 destroyers: ¥5.5. billion)

Implement life extension measures for Asagiri-class (5 destroyers), Abukuma-class (2 destroyers), Hatakaze-class (1 destroyer), and Kongo-class (1 destroyer) to maintain the number of destroyers

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

○ Construction of a submarine (1 submarine: ¥72.8 billion)

Build a submarine of a new class (3,000 tons) with higher detecting and other capabilities in order to conduct intelligence-gathering and surveillance activities in an effective manner in the seas surrounding Japan by increasing the number of submarines from 16 to 22

【FY2017/Mid-Term Defense Program: 4 submarines/5 submarines】

○ Life extension of submarines (life extension work for 3 submarines and parts procurement for 6 submarines: ¥3.7 billion)

Implement life extension measures for Oyashio-class submarines in order to increase the number of submarines from 16 to 22

Oyashio-class submarine (2,700t class)

○ Building of an ocean minesweeper (1 vessel: ¥17.7 billion)

Build a ocean minesweeper (the third of the Awaji-class) (690 tons) which is equipped with higher capability to sweep mines and which has an FRP hull with higher strength in place of a conventional wooden hull

Awaji-class ocean minesweeper (690t class) (image)

○ Building of an ocean surveillance ship (1 ship: ¥22.4 billion)

Build an ocean surveillance ship (the third of the Hibiki-class (2,900 tons)) in order to enhance the capability to gather acoustic information in the seas

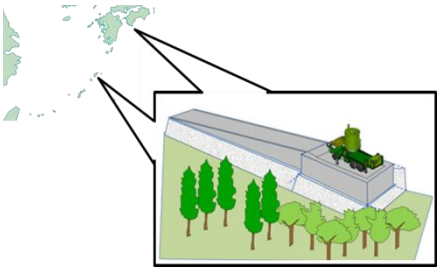
Hibiki-class ocean surveillance (2,900t class)

2 Response to attacks on remote islands

In order to respond to attacks on remote islands, the MOD will develop continuous surveillance capabilities, ensure and maintain air superiority and maritime supremacy, enhance rapid deployment and response capabilities such as transportation and amphibious operation capabilities, and strengthen the infrastructure for C3I capabilities.

(1) Develop continuous surveillance capabilities

◯ Establishment of foundation for deploying mobile warning and control radar in the southwestern region (¥200 million)
Maintain seamless warning and surveillance posture by establishing foundation for deploying mobile warning and control radar in Amami-Oshima (Kagoshima Prefecture) and Tosa-Shimizu (Kochi Prefecture)



Establishment of deployment foundation for mobile warning and control units (image)

◯ Conversion of fixed warning and control radar (FPS-7) and addition of functions for BMD response (¥9.2 billion)
- Acquire fixed warning and control radar (FPS-7) to install on Unishima Island (Nagasaki Prefecture)
- Allocate cost of building facilities necessary to install FPS-7 in Wakkanai (Hokkaido Prefecture) (newly added)
- Add BMD functions to FPS-7s in Okinoerabujima (Kagoshima prefecture) and Miyakojima (Okinawa prefecture).

Fixed warning and control radar (FPS-7)

◯ Acquisition of Unmanned Aerial Vehicles (RQ-4B Global Hawk) (repost)

◯ Improvement of the capability of Airborne Warning And Control System (AWACS) (E-767) (repost)

(2) Ensure and maintain air superiority

◯ Acquisition of fighter aircraft (F-35A) (6 fighters: ¥88.0 billion)
*¥30.9 billion is allocated separately for other related expenses (ground support equipment, etc.)
[FY2017/Mid-Term Defense Program: 22 aircraft/ 28 aircraft]

F-35A fighter aircraft

◯ Upgrade of fighter aircraft (¥5.3 billion)
Upgrade capabilities of existing fighters to adapt to the modernization of the aerial combat capabilities of neighboring countries and to appropriately carry out air defense missions.
- Improvement of air-to-air combat capability of fighter aircraft (F-2) (16 fighters)
- Upgrade of fighter aircraft (F-2) by equipping JDCS (F)* (12 fighters)
*JDCS (F): Japan Self Defense Force Digital Communication System (Fighter)

F-2 fighter aircraft

○ Shifting the posture of fighter squadrons, etc.
- Shift the posture of fighter squadrons to develop readiness for ensuring air superiority, including strengthening the defense posture in the southwestern region
- Establish a new temporary squadron of F-35A (provisional name) at Misawa Air Base

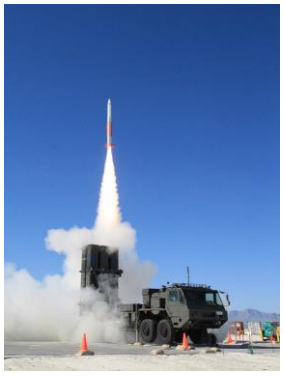
○ Acquisition of new aerial refueling and transport aircraft (KC-46A) (1 aircraft: ¥29.9 billion)
Acquire new aerial refueling and transport aircraft (KC-46A) that will allow fighter squadrons, etc. to continuously execute various operations in the airspace surrounding Japan
[FY2017/Mid-Term Defense Program: 1 aircraft/ 3 aircraft]


New aerial refueling and transport aircraft (KC-46A) (image)

○ Acquisition of surface-to-air missiles for base air defense (0.5 set: ¥2.8 billion)
Acquire surface-to-air missiles for base air defense with higher capabilities in order to counter airborne threats from higher-quality cruise missiles and defend operational infrastructure such as air bases


Surface-to-air missile for base air defense

○ Acquisition of Type-03 middle-range surface-to-air missile (modified) (1 set: ¥17.4 billion)

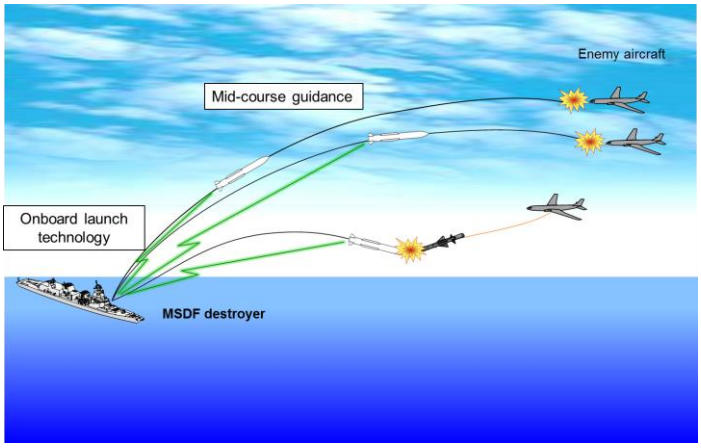

Type-03 middle-range surface-to-air missile (modified) (prototype)

○ Acquisition of Type-11 short-range surface-to-air missile (1 set: ¥4.3 billion)


Type-11 short-range surface-to-air missile

(3) Ensure and maintain maritime supremacy

◯ Development of a new ship-to-air missile (¥9.0billion)
Develop a long-range ship-to-air missile capable of countering enemy aircraft, etc. in order to strengthen the air defense capability of destroyers(standardization based on the Type-03 medium range surface-to-air missile (improved))



Conceptual Image of operation of a new ship-to-air missile

◯ Capability improvement for fixed-wing patrol aircraft (P-3C) (repost)

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

◯ Life extension of patrol helicopters (repost)

◯ Life extension of imagery intelligence gathering aircraft (OP-3C) (repost)

◯ Life extension of destroyers (life extension work for 5 destroyers and parts procurement for 4 destroyers) (repost)

◯ Construction of a submarine (repost)

◯ Life extension of submarines (life extension work for 3 submarines and parts procurement for 6 submarines) (repost)

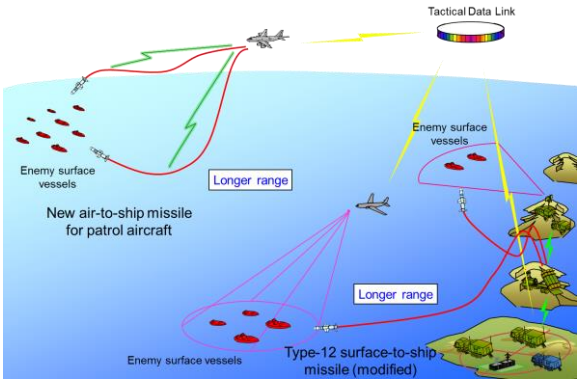
◯ Building of an ocean minesweeper (repost)

◯ Building of an ocean surveillance ship (repost)

◯ Acquisition of Type-12 surface-to-ship missile (1 set: ¥8.1 billion)
[FY2017/Mid-Term Defense Program: 6 units/ 9 units]

Type-12 surface-to-ship missile

◯ Development of the Type-12 surface-to-ship missile (modified) and a new air-to-ship missile for patrol aircraft (¥11.5 billion)
Develop the Type-12 surface-to-ship missile (modified) with upgraded functions and performance, including a longer range compared with existing missiles, and a new air-to-ship missile for patrol aircraft in order to enhance the capability to counter enemy surface vessels, etc. (standardization based on a new ship-to-ship missile (under development))



Conceptual Image of operation of the Type-12 surface-to-ship missile (modified) and a new air-to ship missile for patrol aircraft

(4) Enhance rapid deployment and response capabilities

○ Acquisition of transport helicopter (CH-47JA) (6 helicopters: ¥44.5 billion)
Provision of transport helicopter (CH-47JA) in order to secure the capability for quick and large-scale transport and deployment and enhance effective response capabilities

Cargo helicopter (CH-47JA)

○ Acquisition of tilt-rotor aircraft (V-22) (4 aircraft: ¥39.1billion)
- In view of enhancing unit deployment capabilities in amphibious operations, acquire tilt-rotor aircraft (V-22) that complement and strengthen the transport capabilities of transport helicopters (CH-47JA), including cruising speed and range
- Expenses related to the acquisition of spare parts, etc. (¥34.0 billion)

Tilt-rotor aircraft (V-22)
(picture of the same aircraft type)

○ Acquisition of transport aircraft (C-2) (3 aircraft: ¥55.3 billion)
In view of the decreasing number of the current transport aircraft (C-1), acquire transport aircraft (C-2) with enhanced cruising range, payload, etc. that contribute to large-scale deployments

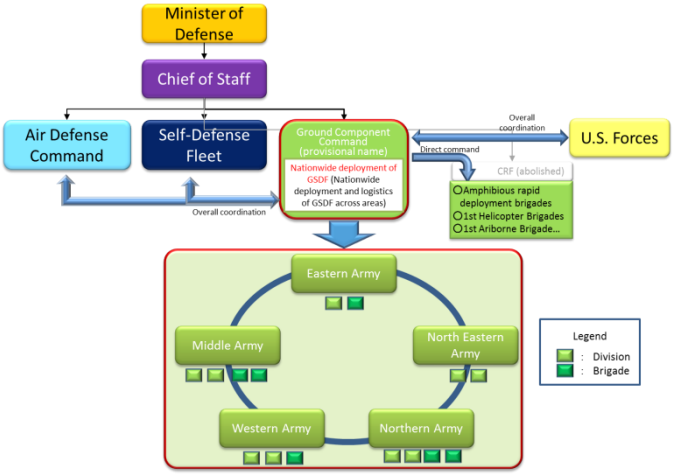
Transport aircraft (C-2)

○ Acquisition of Type-16 mobile combat vehicles (33 vehicles: ¥23.3 billion)
Strengthen rapid deployment capabilities of the basic operational units (rapid deployment divisions and rapid deployment brigades) by deploying Type-16 mobile combat vehicles suited for transportation by aircraft and other means

Type-16 mobile combat vehicle (prototype vehicle)

◯ Development for the establishment of the Ground Component Command (provisional name)

- Allocate related project expenses for the establishment of a unified HQ contributing to enhancing the GSDF's nationwide operation posture
- Develop office buildings for the Ground Component Command HQ (underground part) (Asaka) (¥5.0 billion)



Line of command of the Ground Component Command

◯ Development for the establishment of the Amphibious Rapid Deployment Brigades (provisional name)

- Acquisition of amphibious vehicles (AAV7) (11 vehicles: ¥8.5 billion)
  Acquisition of amphibious vehicles with excellent maritime mobility and protection ability that support units' amphibious landing efforts on remote islands
- Development of facilities related to the Amphibious Rapid Deployment Brigade (provisional name) (Ainoura), etc. (¥380 million)

Amphibious vehicle (AAV7)

◯ Development for an area security unit in the southwestern region (¥70.7 billion)
Develop an office building and other facilities related to the deployment of area security units, etc. in Amami-Oshima and Miyako-jima in order to improve the initial response readiness on remote islands

Key facilities associated with unit deployment (image)

◯ Upgrade of MSDF Osumi-class LST (¥1.2 billion)

- Upgrade MSDF Osumi-class LST to enhance transport capability for amphibious operations
- Acquire parts for upgrades and conduct upgrades necessary for strengthening the opening/closing mechanism of the stern gate which amphibious vehicles pass through and the LST's water pouring/discharging function

MSDF Osumi-class LST

○ Bilateral field training exercise with U.S. Marine Corps in the U.S. and Australia. (Iron Fist and Talisman Sabre)
Send GSDF units to the sea area in the periphery of Camp Pendleton, California, U.S. and the Bradshaw Field Training Area in Australia, in order to conduct exercises on tactical and combat capabilities necessary for operations on remote islands as well as interoperability procedures with the U.S. Marine Corps

Iron Fist

○ Participation in joint exercises in the U.S.
Implement joint exercises in the U.S. in order to enhance the SDF's joint operation capabilities and bilateral response capabilities with the U.S. Forces related to attacks on remote islands

Joint exercises in the U.S. (image)

○ Implementation of SDF joint exercises (field training exercises) (JX: Joint Exercise)
Conduct exercises related to the operations of the GSDF, MSDF and ASDF in armed attack situations in order to maintain and enhance the SDFs' joint operation capabilities

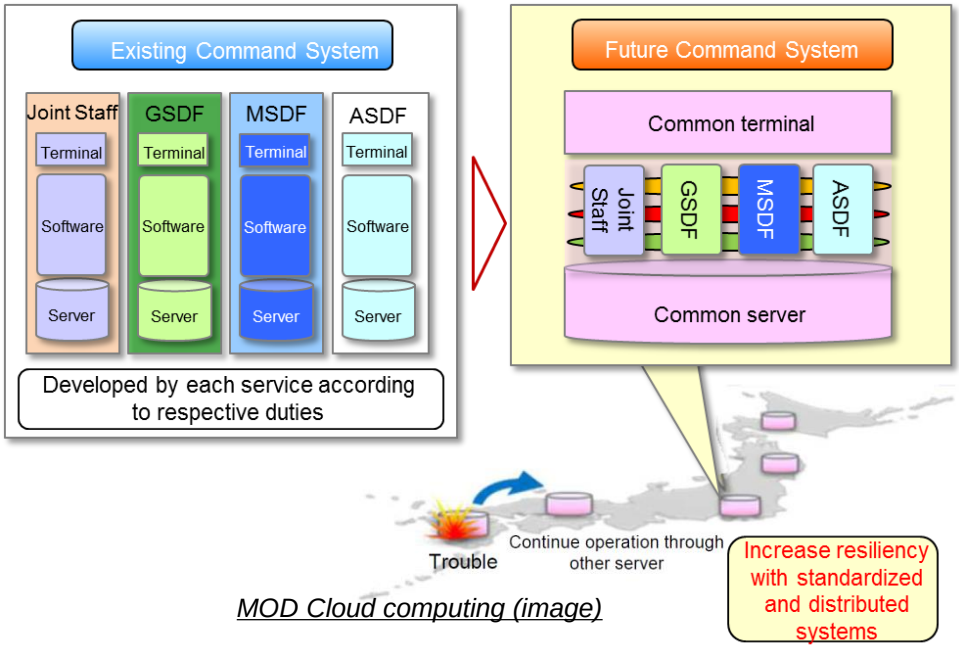
SDF joint exercises (image)

(5) Strengthen the infrastructure for C3I capabilities

○ Strengthening of information and communications capability, which is a prerequisite for supporting nation-wide operations

Gradually introduce cloud technology to integrate the command systems that had been developed individually by each SDF service. The integration will increase the system's operational flexibility and resiliency, and at the same time, reduce the costs associated with development and maintenance of the system

- Replacement of the central command system (design in FY2017) (¥4.4 billion)
- Establishment/Development of common cloud computing infrastructure, etc. (¥800 million)
- Establishment/Development of cloud computing infrastructure for the GSDF (¥100 million)
- Establishment/Development of cloud computing infrastructure for the MSDF (¥3.9 billion)
- Establishment/Development of cloud computing infrastructure for the ASDF (¥4.0 billion)



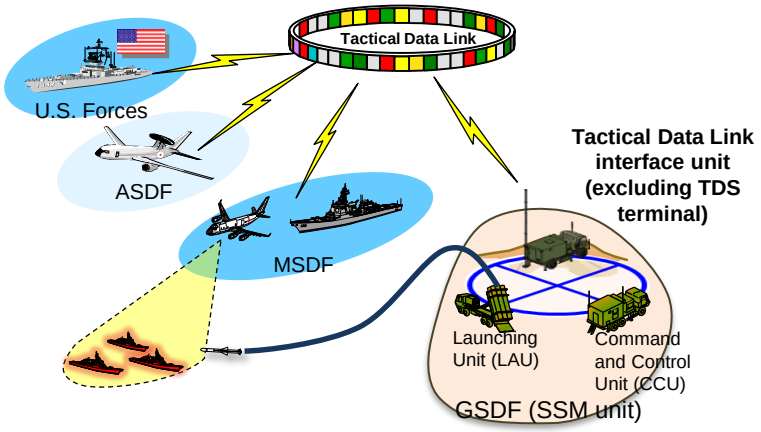
MOD Cloud computing (image)

○ Introduction of Tactical Data Link (TDL) capability into the GSDF to establish collaborative posture for anti-ship combat with the MSDF, ASDF, and U.S. Forces

- Development of Tactical Data Link (TDL) interface unit (excluding Tactical Data Distribution system (TDS) terminal) (1 set: ¥300 million)

  Allocate expenses for acquiring TDL interface unit (excluding TDS terminal) that is linked to the GSDF surface-to-ship missile (SSM) system, in order to share highly real-time target information and other tactical information among the GSDF, MSDF, ASDF, and the U.S. Forces
- Human resource development through education entrusted to the U.S. Forces (¥30 million)

  Allocate expenses for human resource development intended to foster personnel who operate and manages TDL interface unit



Conceptual image of GSDF SSM operation realized by the introduction of Tactical Data Link capability

（6）Others

○ Acquisition of flight check aircraft（Citation 680A）
(2 aircraft: ¥9.5 billion)

Acquire new flight check aircraft in order to ensure the flight safety of SDF and civilian aircraft by maintaining and managing the airfield functions through checks on the functions of aircraft safety radio facilities established by the SDF

Flight check aircraft（Citation 680A）
(picture of the same aircraft type)

3 Response to ballistic missile attacks

Strengthen postures to protect Japan from ballistic missile attacks in multi-layered and sustainable manners. Simultaneously build posture to respond to attacks by guerillas and special operations forces in addition to ballistic missile attacks.

BMD-related budget: ¥64.9 billion

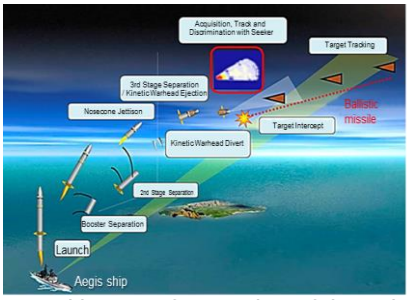
(1) Response to ballistic missile attacks

◯ Upgrade of the capability of Aegis-equipped destroyers
(1 destroyer: ¥5.8 billion)
Continue upgrading two Atago-class destroyers with ballistic missile defense capability, which started in FY2012.
*Part of the expense for this project was integrated in the third supplementary budget of FY2016 (¥6.4 billion).

Atago-class destroyer

◯ Japan-U.S. cooperative development of Advanced Ballistic Missile Interceptor (SM-3 Block IIA) (¥300 million)
Japan and the U.S. will continue their cooperative development of an Advanced Ballistic Missile Interceptor (SM-3 Block IIA) to be deployed on Aegis-equipped destroyers

◯ Acquisition of an Advanced Ballistic Missile Interceptor (SM-3 Block IIA) (¥14.7 billion)
Acquire an Advanced Ballistic Missile Interceptor (SM-3 Block IIA) to be deployed on Aegis-equipped destroyers



Conceptual image of operation of the Advanced Ballistic Missile Interceptor (SM-3 Block IIA)

◯ Introduction of Advanced Interceptor missiles (PAC-3MSE), etc. (¥105.6 billion)*
* The expense this project, which appeared in FY2017 budget request, was integrated in the third supplementary budget of FY2016.

SM-3 Block IIA

◯ Conversion of fixed warning and control radar (FPS-7) and addition of functions for BMD response (repost)

◯ Research on a future ballistic missile interception system (¥60 million)
To enhance permanent readiness, conduct simulation and other research on optimal system to forge MD capability including the introduction of new assets

(2) Response to attacks by guerillas and special operations forces

◯ Devices to detect chemical agents (33 devices: ¥200 million)

◯ Acquisition of Type-16 mobile combat vehicle (repost)

◯ Acquisition of light armored vehicles (9 vehicles)*
* The expense for this project, which appeared in FY2017 budget request, was integrated in the third supplementary budget of FY2016.

◯ Acquisition of personal equipment
Acquisition of Type-89 rifles (2,300 rifles: ¥900 million)

4 Response in outer space

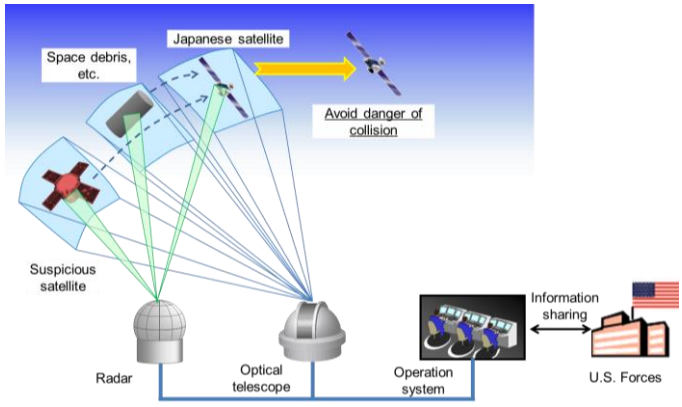
Strengthen information gathering, command, control and communications capabilities by using satellites, and implement measures to secure stable use of outer space

Space-related budget: ¥42.7 billion*

*Excludes the budget of BMD (space-related programs)

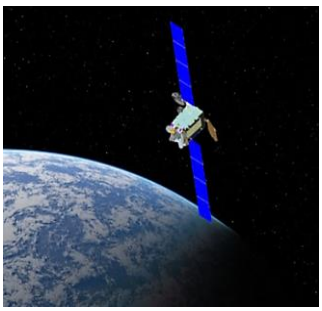
Promotion of space programs

○ Efforts related to Space Situational Awareness system (¥1.0 billion)
- Basic design, etc. concerning the development of a Space Situational Awareness (SSA) system necessary for SSA based on cooperation with the U.S. and relevant domestic organizations including JAXA.
- Further enhancement of readiness posture for the development of SSA-related facilities and the establishment of an operations manual



Space Situational Awareness system and its operation (image)

○ Use of satellite communication (¥27.5 billion)
- Partial procurement of X-band defense communications satellite-3 (a successor satellite of Superbird C2), etc.
- Modification of equipment to adapt to X-band communications satellites
- Leasing of commercial satellite communications lines and improvement and maintenance of satellite communications equipment



X-band defense communications satellite (image)

○ Use of commercial imagery satellites and meteorological satellite information (¥10.9 billion)
- Acquisition of data for imagery analysis (WorldView-4)
- Conduct empirical study on the use of JAXA Advanced Land Observing Satellite-2 (ALOS-2) and small Earth observation satellite (ASNARO-1) developed by the Ministry of Economy, Trade and Industry
- Research on information gathering using nano satellites for earth observation

○ Research for the enhancement of C4ISR* functions through the use of outer space (¥3.3 billion)
Research methodologies for analyzing infrared satellite images (¥60 million)

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

○ Dispatch of personnel to the U.S. Air Force Space Operations Course (¥11 million)
Dispatch personnel to “Space Operations Course” held at U.S. air force base in Colorado, U.S.A. to acquire knowledge of space in general.

*Budget of BMD space-related programs (¥40.0 billion)

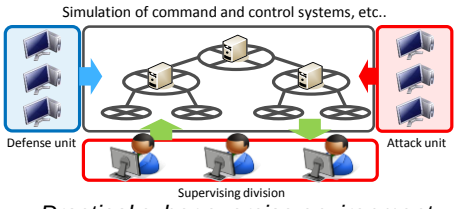
5 Response in cyberspace

In order to ensure sufficient cybersecurity against cyber attacks at all times, develop necessary readiness, including enhancing the resilience of the SDF's various command and control systems and information and communications networks, and developing a practical training environment where the response capability against cyber attacks can be tested

Cyber-related budget: ¥12.4 billion

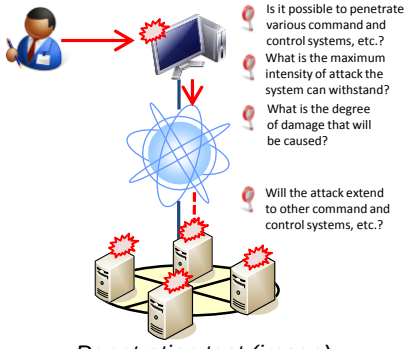
(1) Improvement/enhancement of capabilities and systems

○ Development of capabilities and systems for practical cyber exercises
Develop capabilities for implementing exercises using a practical cyber exercise environment simulating command and control systems and/or information and communications systems



Practical cyber exercise environment (image)

○ Development of capabilities for conducting penetration tests (*)
Develop capabilities for conducting penetration tests concerning command and control systems and information and communications systems

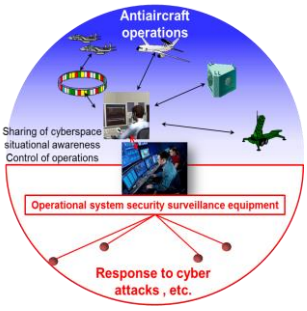


Penetration test (image)

* Penetration test: a test intended to check the vulnerability of information systems by attempting penetration into or attacks on real systems using methods similar to those used in actual cyber attacks

(2) Improvement/enhancement of operational infrastructure

○ Development of operational system security surveillance equipment (¥700 million)
Develop security surveillance equipment in order to quickly detect cyber attacks on the ASDF's operational systems and make appropriate response

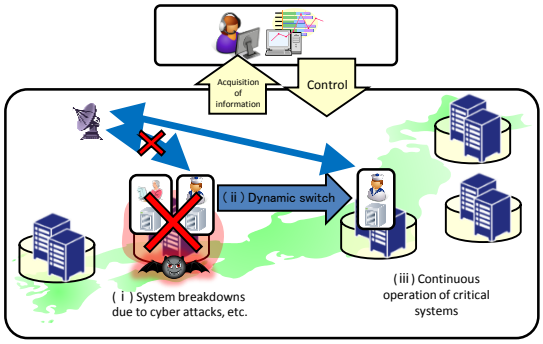


Operational system security surveillance equipment (image)

○ Development of a security surveillance posture concerning cloud computing infrastructure (¥2.6 billion)
Design and produce security service programs for the ASDF's cloud computing infrastructure and consolidate and optimize networks within bases

(3) Research on cutting-edge technologies

○ Research on cyber resilience (*) technology to strengthen the response capability against cyber attacks, etc. (¥700 million)
Conduct research intended to enable sustainable operation of the information and communications infrastructure of the MOD/SDF in the event of cyber attacks



Research on cyber resilience technology to strengthen the response capability against cyber attacks, etc. (image)

* Cyber resilience: capability to respond flexibly and restore the systems to an operable status when command and control systems and information and communications networks have been partially damaged by cyber attacks, etc.

6 Response to large-scale disasters

Swiftly transport and deploy sufficiently sized units in the event of various disasters, and develop response readiness that is sustainable over a long-term through establishing a rotating staffing system based on a joint operational approach

(1) Maintenance/enhancement of function of military camps/bases to serve as hubs for disaster response

○ Promotion of seismic retrofitting and tsunami defense measures to maintain and enhance functions in preparation for the event of a disaster (¥8.1 billion)

○ Establishment of the GSDF Middle Army Helicopter 3rd Squadron (provisional name)
Establish the GSDF Middle Army Helicopter 3rd Squadron (provisional name) at Miho Sub Base (provisional name) in order to enhance the response capability against large-scale disasters in coastal areas facing the Sea of Japan

○ Secure deployment footholds for the SDF in the event of disasters (Nara and Fukui) (¥4 million)
Allocate necessary expenses to secure SDF deployment facilities to serve as wide-area disaster response hubs from the perspective of establishing an effective system to handle large-scale disasters

(2) Implementation of exercises, etc. to respond to large-scale and unconventional disasters

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

SDF Joint Exercise for Rescue (JXR) (image)

○ 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 the U.S. Forces in Japan in the event of large-scale domestic disasters, and to maintain and enhance the capability to respond to earthquake disasters


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

○ Joint disaster drills on remote islands (RIDEX: Remote Island Disaster Relief Exercise)
Implement drills to maintain and enhance capabilities to ensure smooth joint disaster response operations against sudden disasters caused by typhoons, etc. on remote islands


Joint disaster drills on remote islands (RIDEX) (image)

(3) Acquisition, etc. of equipment contributing to disaster response

◯ Acquisition of tilt-rotor aircraft (V-22) (repost)

◯ Acquisition of transport helicopters (CH-47JA) (repost)

◯ Acquisition of a transport aircraft (C-2) (repost)

◯ Acquisition of amphibious vehicles (AAV7) (repost)

◯ Acquisition of Field Medical surgery System (1 set: ¥200 million)

Field Medical surgery System

◯ Upgrade of MSDF Osumi-class LST (repost)

Enhancement of capabilities necessary to respond to Nuclear, Biological, and Chemical (NBC) weapons

◯ Protection from contaminants
Personal protection equipment (3,000 sets)*
* The expense for, acquisition of personal protection equipment, which appeared in FY2017 budget request, was integrated in the third supplementary budget of FY2016

◯ Acquisition of devices to detect chemical agents (repost)

7 Strengthen intelligence capabilities

Strengthen the MOD's system for intelligence collection, processing information, and analyzing and sharing the collected information, in order that the MOD can promptly detect and swiftly respond to warnings of various situations in areas surrounding Japan and take measures based on medium-to-long-term military trends

○ Enhancement of the Defense Attaché System
Dispatch one additional attaché to the Philippines and Vietnam, and re-dispatch one to Finland.(The prescribed number of attachés after the approval of the FY2017 budget: 45 embassies, 2 permanent missions, 67 personnel in total)

○ Research on information gathering using nano satellites for earth observation (repost)
Consider the possible use of nano satellites for a wide-area surveillance and warning signs detection by taking advantage of the characteristics of such satellites, which enable high-frequency collection of imagery data when operated in a large number despite their comparatively low resolution

○ Reinforcement of intelligence gathering and analysis capabilities
Establish necessary arrangements at the Defense Intelligence Headquarters (DIH), etc. to boost intelligence gathering and analysis capabilities related to international terrorism, etc.

○ Develop a system to share geospatial data possessed and maintained individually by each SDF service and the Defense Intelligence Headquarters throughout the whole of the MOD/SDF so that such data can be effectively and efficiently maintained (development of an integrated geospatial data infrastructure (integrated GDI))

○ Develop common infrastructure of the Defense Intelligence Headquarters in order to enhance all-source analysis and to improve the efficiency of information processing

○ Acquisition of Unmanned Aerial Vehicles (RQ-4B Global Hawk) (repost)

○ Acquisition of data for image analysis (WorldView-4) (repost)
Conduct surveillance in areas surrounding Japan using the MOD's principal optical satellite (WorldView-4), to which MOD has assured tasking right

Ⅲ Support stabilization of the Asia-Pacific region and improvement of the global security environment

In order to ensure the stability of the Asia-Pacific region, Japan will enhance bilateral and multilateral cooperative relationships and conduct various activities including training and exercises in a timely and appropriate manner, as well as actively engage in international peace cooperation efforts to properly address global security challenges.

1 Response to stabilization of the Asia-Pacific Region

Promotion of capacity building assistance

◯ New initiatives for comprehensive and effective capacity building assistance for ASEAN countries (¥330 million)
Comprehensively and effectively enhance the capacity of ASEAN countries, as a whole, through human resource development and technical assistance while using external resources
- Conduct research to define recipient country requirements for maritime security capacity building programs
- Implement comprehensive HA/DR capacity building projects
- Conduct research to define recipient country requirements for cyber security capacity building programs
- Implement programs to enhance ASEAN capability for dispose of landmines and unexploded ordnance

A comprehensive HA/DR project (image)

◯ Continue capacity building assistance for individual countries
- South East Asia: Timor-Leste, Cambodia, Vietnam, Indonesia, Myanmar, the Philippines, Thailand, Laos
- East Asia: Mongolia
- Central Asia: Kazakhstan, Uzbekistan
- Oceania: Papua New Guinea

A project for disposal of landmines and unexploded ordnance (image)

Promotion of defense cooperation and exchanges

◯ Initiatives under the ASEAN Defense Ministers' Meeting-Plus (ADMM-Plus)
Actively promote the enhancement of regional defense and security cooperation through ADMM-Plus, which is the only official meeting of defense ministers in the Asia-Pacific region

The fifth ADMM-Plus Humanitarian Assistance/Disaster Relief (HA/DR) Experts' Working Group meeting

◯ Participation in Pacific Partnership (PP) 2017
Visit countries in the Asia-Pacific region to provide medical services, facilities maintenance and repair services, conduct cultural exchanges, etc. Through cooperation with governments, militaries, international organizations, and NGOs, the PP strengthens partnerships among participating countries and facilitates international disaster relief operations

Pacific Partnership

2 Appropriate response to the improvement of global security environments

Enhancement of capability to conduct overseas activities

◯ Participation in multilateral exercises
Participate in multilateral exercises, such as Cobra Gold, in order to enhance capabilities related to international peace cooperation efforts and rescue of Japanese nationals overseas

Cobra Gold (image)

International cooperation with UN and partners in the areas of strength

◯ Dispatch of instructors to PKO Centers in Africa
The SDF dispatches personnel as instructors in order to educate PKO personnel mainly in African countries to help improve their own peacekeeping capabilities and to maintain stability in the region

Ensuring maritime security

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

A destroyer escorting commercial vessels

A P-3C patrol aircraft conducting warning and surveillance operations in an airspace over commercial vessels

Ⅳ Strengthen Japan-U.S. Alliance/ Measures for Bases

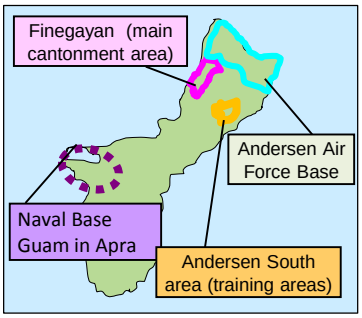
While maintaining the deterrence of U.S. Forces, Japan will steadily implement specific measures including the realignment of U.S. Forces in Japan to mitigate the impact on local communities, including those in Okinawa.

1 Measures for mitigating the impact on local communities

¥241.3billion

Relocation of U.S. Marine Corps Personnel stationed in Okinawa to Guam

- ○ Funding for projects necessary for the relocation of U.S. Marine Corps Personnel from Okinawa to Guam, etc. (¥26.5 billion)
- ○Construction of the Bachelor Enlisted Quarters （Finegayan area）,etc.



Guam

***Realignment of U.S. Forces in Japan* (¥214.9 billion)**

- ○ Relocation of MCAS Futenma (¥170.4 billion)
- ○ Return of lands south of Kadena Air Base (¥5.6 billion)
- ○ Relocation of Carrier-based Aircraft from Atsugi Air Facility to MCAS Iwakuni, etc.（MCAS Iwakuni, FCLP Facilities, Kanoya Air Base）（¥18.1 billion）
- ○ Facility Improvement for contingency use (¥1.5 billion)
- ○ Training Relocation of U.S. aircraft to mainland Japan and Guam from Kadena Air Base and other airfields (¥7.2 billion)
- ○ Community development measures (realignment grants, etc.) (¥12.1 billion)

MCAS Futenma

2 SACO-related cost

¥ 3.5 billion

- ○ Japan will continue to steadily implement those measures in the Special Action Committee on Okinawa (SACO) Final Report unless being subject to change under the Japan-U.S. Security Consultative Committee (2+2) Joint Statement

3 Promote measures for bases

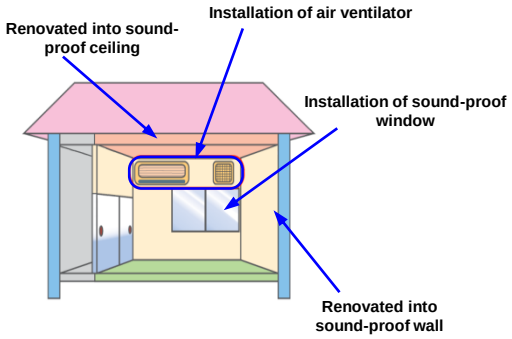
Steadily implement measures for communities around bases and promote measures to secure smooth and effective stationing of the U.S. Forces in Japan in order to ensure harmony between defense facilities and neighboring communities

(1) Expenses related to programs for communities around bases — ¥124.5 billion

Including: Residential sound insulation: ¥37.5 billion
Improvement of living environment of neighboring communities: ¥86.9 billion

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

【Example of residential sound insulation】



River restoration

(2) Cost-sharing for the stationing of U.S. Forces in Japan — ¥196.2 billion

Including: Special Measures Agreement: ¥147.3 billion
Facilities improvements: ¥22.2 billion
USFJ employee measures, etc.: ¥26.7 billion

◯ Expenses of the Special Measures Agreement to ensure the smooth and effective stationing of U.S. Forces in Japan
- Share the cost of wages of USFJ employees and cost of utilities used at USFJ facilities
- Improve facilities (barracks, family housing, etc.)
- Share the cost of social insurance premiums by the employer (healthcare insurance, welfare annuity insurance, etc.) for USFJ employees

Barracks

(3) Rental cost of facilities, compensation expenses, etc. — ¥138.4 billion

◯ Rental cost of defense facility site, etc., compensation for the loss of fishers' income due to training on water areas, etc.

Ⅴ Measures concerning personnel and education

In order to secure highly-qualified human resources (SDF personnel, SDF reserve personnel, etc.) who will play a part in national defense while enhancing their strength, the MOD will comprehensively review and appropriately implement necessary measures including recruitment, reemployment , and securing of SDF reserve personnel, etc. and also promote several measures to support the advancement of women.

1 Promotion of measures to secure highly-qualified human resources who will play a part in national defense

(1) Enhancement of recruitment programs

◯ Enhancement of advertisement and readiness for recruitment to deal with the increasingly severe recruitment environment (¥800 million)

・Create video contents for advertisement for recruitment (¥150 million)

Create and promote video contents for advertisement for recruitment, by effectively combining TV commercial, which is widely prevalent among the audience without being influenced by their preference, and web video, which can easily spread regardless of place or time, and by taking advantage of each strength

(2) Enhancement of reemployment support programs

◯ Establishment and enhancement of vocational training programs

- Establish a course for those who prepare for nursery teacher examinations and expand an induction training program for nursing care workers in order to support reemployment in the fields of child care and nursing care, to which the government as a whole attaches importance (¥5 million)
- Establish courses for prospective warehouse managers, those who prepare for maritime officer examinations, etc. in order to enhance support for reemployment in the logistics and shipping industries (¥5 million)
- Expand education concerning disaster prevention / crisis management in order to enhance support for reemployment at disaster prevention-related divisions of local governments (¥30 million)

An induction training program for nursing care workers (exercise)

Education on disaster prevention / crisis management *(exercise)*

◯ Implementation of career counseling service for SDF personnel scheduled to retire (¥270 million)

Start mobile counseling service using female counselors in order to appropriately provide support, including advice concerning industries in which many women work

(3) Promotion of measures related to SDF reserve personnel, etc. who support sustainable operation of units

◯ Provision of special subsidy for corporations employing SDF ready reserve personnel (¥1.52 billion)
Provide companies employing SDF ready reserve personnel with ¥42,500 per person monthly to secure active cooperation from them.

◯ Provide employers with information of their employees who serve as SDF reserve or ready reserve personnel
Establish a framework in which MOD provides for the employers with information contributing to securing their understanding and cooperation with reserve duties.

◯ Continuous Service Incentive Allowance (¥170 million)
Provide ¥120,000 to the SDF ready reserve personnel serving for over two years and nine months with good performance in order to encourage their long service.

Activities conducted by SDF ready reserve personnel after the Kumamoto Earthquake Disaster in 2016

(4) Others

◯ Promotion of measures to prevent power harassment

2 Promote measures to ensure further engagement of female personnel and the work-life balance

Further expand recruitment and promotion of female personnel while implementing initiatives to integrally promote work-life balance

Female Personnel engaged in disaster relief operation

The first female MSDF officer to command a destroyer

Playing vital roles as a pilot

Female SDF personnel in action

(1) Improvement of the environment for the working style reform (¥430 million)

◯ Construct a multi-story parking garage in the Ichigaya area in order to contribute to the working style reform by improving the car commuting environment through measures such as enabling personnel using the Ichigaya child care center to commute to the MOD with children (¥420 million)

◯ Hold lecture meetings to raise awareness about the work-life balance at SDF camps, etc.

Construction of a multi-story parking garage (image)

A scene of an awareness-raising lecture meeting

(2) Improvement of the working environment for female SDF personnel (¥1.4 billion)

◯ Improve the environment for female SDF personnel
- Develop spaces for women (ASDF bases, etc.)
- Develop residential spaces in the boarding facility for students (National Defense Academy), etc.

Develop spaces for women (image)
(eg. renovation of barracks for female SDF personnel)

Develop spaces for women (image)
(e.g. construction of a bathhouse for female personnel)

◯ Development training of mentors

◯ Invite outsourced counselors for female SDF personnel, etc.

(3) Improving work-life balance (¥70 million)

◯ Establishment of child-care facilities on SDF premises, research and design work for establishing new facilities and renovating existing ones, provision of furniture/fixture, etc. (¥50 million)
Develop child-care facilities on premises suitable for work shifts peculiar to SDF so that personnel raising children can engage in their duties without concern
- Newly establish child-care facilities (National Defense Medical College)
- Research and design work for establishing new child-care facilities and renovating existing ones (Komaki and Iruma Air Bases of the ASDF)
- Provide furniture/fixture. for child-care facilities in SDF buildings

* Note: The Ichigaya child care center, which is scheduled to be opened in FY2017, will be operated as a nursery within a business facility upon approval from the Shinjuku Ward.


Child-care facilities in SDF buildings (image)

◯ Provision of furniture/fixture for temporary child-care service in case of emergency call (¥20 million)
- Provide furniture/fixture such as safety mats and baby beds for temporary child-care service in case of emergency call (27 sites)
- Implement temporary child-care service drills, preparing for an emergency call
- Participate in courses designed to improve child-care skills for temporary child-care service in case of emergency call (MSDF)


A scene from temporary child-care service in the drill for an emergency call

(4) Promotion of female personnel engagement in international cooperation, etc. (¥3 million)

◯ Exchanges with servicewomen from other countries (a symposium on the further engagement of female personnel)

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

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

(5) Implementation of training and drills. for raising awareness (¥10 million)

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

◯ Joint training for promoting gender equality, etc. (GSDF, MSDF, and ASDF)

◯ Distribution of pamphlets featuring activities of female personnel

A scene of the joint training

(6) Others (¥50 million)

◯ Promotion of measures to prevent sexual harassment, etc.

◯ Start mobile counseling service using female counselors in order to appropriately provide support, including advice concerning business categories in which many women work (repost)

3 Personnel management system reform

Steadily implement measures related to the personnel management system reform from the perspective of ensuring the SDF’s strength and effectively securing personnel amid the severe fiscal situation, the increasing sophistication and complexity of equipment, and the diversification and internationalization of duties in recent years, while taking into consideration various factors including skills, experience, physical strength, and morale

4 Strengthen education and research systems

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

(1) The National Institute for Defense Studies

◯ Enhance international research exchanges
- Start research exchange with the National Defense College of the Philippines and Central Asian countries (Kazakhstan Institute for Strategic Studies, etc.)
- Promote exchanges of opinions with government officials and major research institutions in other countries with respect to “East Asian Strategic Review” and “NIDS China Security Report,” etc.

◯ Enhance the exhibition of war history-related reference materials
Prepare new war history-related reference materials, such as replicas, following the relocation to the Ichigaya area

(2) The National Defense Academy

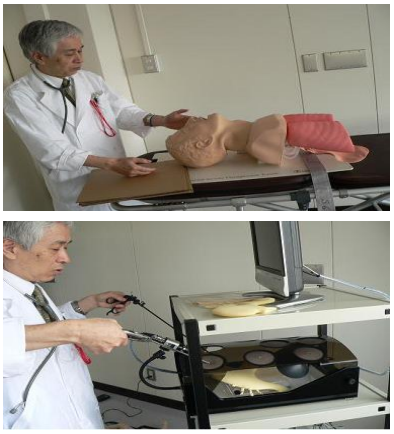
◯ Develop the education and research system
Introduce educational and experimental instruments in response to the advancement of science and technology and the expansion of education and research field ,etc. (¥400 million).

(3) The National Defense Medical College

◯ Strengthen the functions of the college as a hub for education and research in the field of military medicine
- Develop clinical skills laboratories, etc. (¥200 million)
- Conduct advanced research on military medicine (¥320 million)

◯ Strengthening of the planning function
Strengthen the planning function of the college and hospital by reorganizing some departments in order to improve the comprehensive planning and coordination capability of the college as a whole and the management of the hospital

◯ Improvement/enhancement of clinical systems
Increase the number of staff of the National Defense Medical College Hospital to cope with medical care for Type I infectious diseases and strengthen medical safety and infection control



Clinical skills training using simulators (image)

5 Strengthen health functions

Promote initiatives for upgrading SDF hospitals to hubs with enhanced functions and establish an efficient and high-quality medical care system, including improved management of the National Defense Medical College Hospital, etc. In addition, greater emphasis will be placed on securing and training of medical officers, nurses, and emergency medical technicians Furthermore, strive to enhance frontline first aid capabilities and develop postures for rapid evacuation of the injured personnel

◯ Initiatives toward upgrading SDF hospitals to hubs with enhanced functions
Steadily promote development of a core hospital in each district and hospitals with special functions including education of international activities, submarine medicine, and aviation medicine
- Design for rebuilding of Fukuoka Hospital (the main hospital in the Kyushu area) (¥300 million)
- Site preparation work for the construction of Iruma Hospital (provisional name) (¥300 million)
- Development toward the conversion of JSDF Central Hospital's medical care information system, etc. (¥100 million)

◯ Improve frontline first aid capabilities in response to emergency events
Development of educational equipment in order to enhance the first aid capability on the frontlines (¥130 million)
- Develop a simulator as an educational equipment intended to help acquire skills required for the treatment of gunshot wounds and other injuries

Image of educational training using a simulator

Image of medic bag

◯ Enhance capabilities in response to infectious diseases
- Develop human resources specialized in infectious diseases (¥5 million)
- Build facilities and procure equipment for development of a structure for treatment of patients with Type I infectious diseases at the National Defense Medical College Hospital and JSDF Central Hospital (¥200 million)
- Increase the number of staff of the National Defense Medical College Hospital to cope with medical care for Type I infectious diseases and strengthen medical safety and infection control (repost)

Image of response toward infectious diseases

◯ Initiatives contributing to smooth activities of SDF in the southwestern region
Expenses related to a study on medical facilities in Okinawa Prefecture (¥20 million)

Ⅵ Streamlining Initiatives

Various initiatives will be promoted to further rationalize and streamline overall equipment acquisitions, seeking to save approx. ¥204.0 billion

1 Procurement of equipment, etc. and services using long-term contracts
[Expected reduction: approx. ¥11.0 billion]

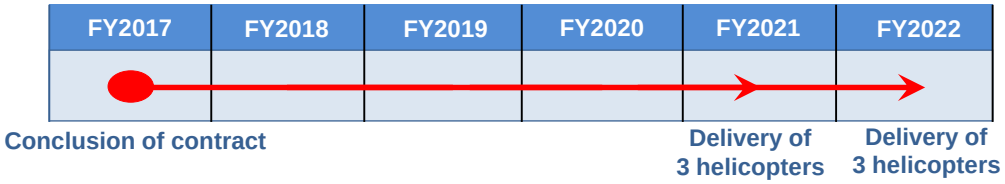
Pursue the reduction of procurement cost and stable acquisition by making use of long-term contracts over five years

○ Bulk acquisition of 6 ASDF transport helicopters (CH-47JA) under long-term contract (procured over 6 fiscal years)

(Expected reduction: approx. ¥8.6 billion (16.2%))

Cargo helicopters (CH-47JA)

【Acquisition under long-term contract (Image)】



Total: ¥44.5 billion

Reduction: ¥8.6 billion (Minus 16.2%)

○ Long-term contract of Performance Based Logistics (PBL) in order to improve operational availability and ensure timely and adequate parts supply posture, etc.

• Transport aircraft (C-130R) (procured over 6 fiscal years)
(Expected reduction: approx. ¥2.4 billion (16.5%))

Transport aircraft (C-130R)

(For information)
The expenses to install Patriot system which corresponds with PAC-3MSE missiles (with a contract over 5 fiscal years) was integrated into the third supplementary budget draft of FY 2016.
(Expected reduction: approx. ¥61.6 billion (29.7%))

*The above figure contains the reduction of ¥41.9 billion by block buying, including spare equipment for maintenance, and ¥19.7 billion reduction through the use of civilian goods and review of configuration.

PAC-3MSE missile

2 Review maintenance methods [Expected reduction: 54.0 billion]

Streamline maintenance costs by extending periodic maintenance intervals

【Example】

○ Acquisition of engines of CH-47JA through the modification of existing engines and maintenance
(Expected reduction for 12 engines: approx. ¥3.5billion)

○ Use of common program testing equipment for destroyers (Hyuga and Murasame classes)
(Expected reduction: approx. ¥2.6 billion)

○ Consolidation of functions associated with the introduction of a cloud computing system, and common use of software programs
(ASDF cloud computing system (provisional name))
(Expected reduction: approx. ¥2.8 billion)

Cargo helicopters (CH-47JA)

Hyuga-class destroyer

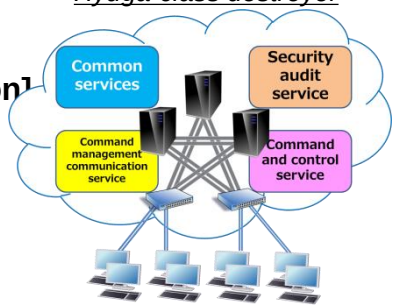
3 Use of civilian goods and review of specifications

[Expected reduction: 58.2 billion]

Pursue cost savings by using civilian goods and reviewing specifications of equipment with regard to cost effectiveness

【Example】

○ Development of a new ship-to-air missile based on a similar domestically-developed missile
(Expected reduction: approx. ¥14.8 billion)

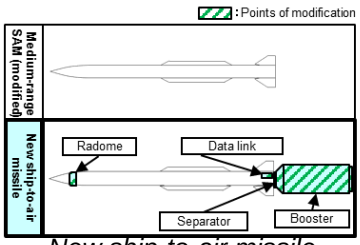


ASDF cloud computing system (provisional name) (image)

4 Bulk purchase of equipment

[Expected reduction: approx. ¥46.7 billion]

Streamline budget costs by reviewing equipment with high prices due to small-lot purchases and long-term maintenance and by concentrating budget requests for them in a single fiscal year if cost savings can be expected



New ship-to-air missile (image)

5 Prime cost scrutiny, etc.

[Expected reduction: approx. ¥34.5 billion]

Pursue further cost reduction through measures such as scrutinizing the unit cost and related expenses of major equipment.

6 Amount of reduction achieved through past streamlining efforts

Example	FY2014	FY2015	FY2016	FY2017	FY2018
Procurement of equipment, etc. and services using long-term contracts	—	¥41.7 billion	¥14.8 billion	¥11.0 billion	
Review maintenance methods (Logistics reform)	¥8.1 billion	¥3.36 billion	¥43.2 billion	¥54.0 billion	
Use of civilian goods and review of specifications	¥25.0 billion	¥42.3 billion	¥45.5 billion	¥58.2 billion	
Bulk purchase of equipment	¥33.1 billion	¥35.0 billion	¥46.5 billion	¥46.7 billion	
Prime cost scrutiny, etc.	–	–	–	¥34.5 billion	
Single-year total	**¥66.0 billion**	**¥153.0 billion**	**¥150.0 billion**	**¥204.0 billion**	Required cost reduction Approx. ¥130 billion
Total	**¥66.0 billion**	**¥219.0 billion**	**¥369.0 billion**	**¥573.0 billion**	**¥700.0 billion**

(Note) * The reduction in the expenses to install Patriot system which corresponds with PAC-3MSE missiles, ¥61.6 billion, is included in FY2017's reduction amount.
* The estimated reduction amount is at the moment of budget approval, and is still subject to change.
*Figures may not add up to the total due to rounding.

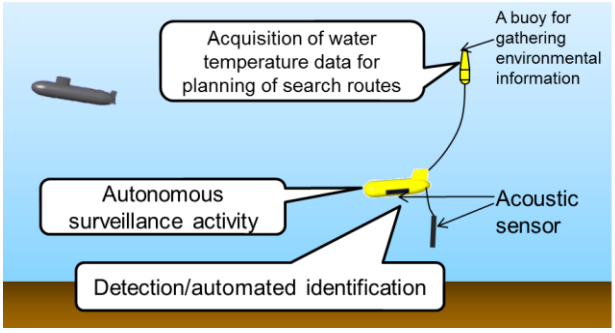
Ⅶ Initiatives to promote defense equipment and technology policies

1 Promote strategic initiatives to ensure technological superiority

Promote strategic initiatives, including enhancing research and development and expanding the Innovative Science & Technology Initiative for Security (funding program), based on the Japan Defense Technology Strategy (announced in August 2016)

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

◯ Research on autonomous surveillance technology and a sensor system for unmanned underwater surveillance vehicles (¥900 million)
Conduct research on autonomous surveillance technology and a sensor system used in unmanned underwater vehicles that will significantly enhance the underwater surveillance capability



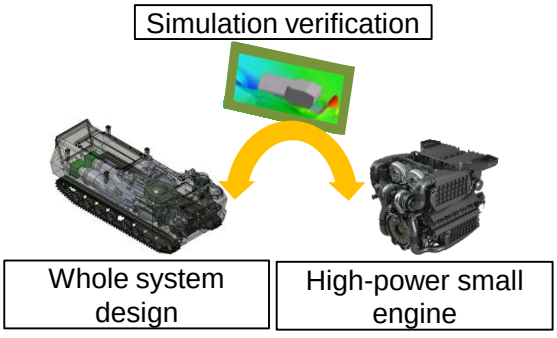
Research on autonomous surveillance technology and a sensor system for unmanned underwater surveillance vehicles (image)

*Based on the Basic Policy of Government Agencies Relocation, promote the construction of a new test facility for research on unmanned underwater vehicles in Iwakuni.

◯ Research on cyber resilience technology (repost)

◯ Research intended to enhance future amphibious technology

• Research on future amphibious technology (¥2.4 billion)
Conduct research concerning a whole system design using a simulation model and the reduction of the size of high-power engines in order to enhance sea-surface mobility,etc**.**
***The expense for research on a multi-environment simulator for vehicles, which appeared in FY2017 budget request, was integrated in the third supplementary budget of FY2016 (¥2.0 billion).

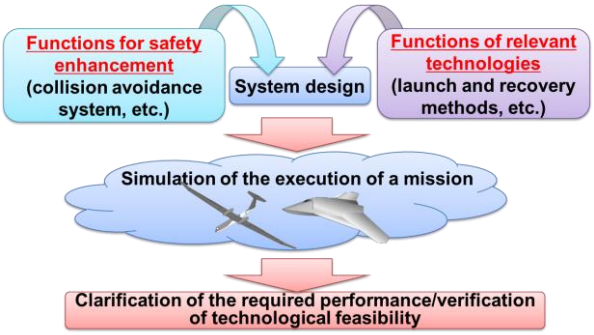


Research on future amphibious technology (image)

*The expense for research on an innovative electromagnetic acceleration system, which appeared in FY2017 budget request, was integrated in the third supplementary budget of FY2016 (¥1.0 billion).

Research and development based on the Technology R＆D Vision of Future Unmanned Equipment (announced in August 2016)

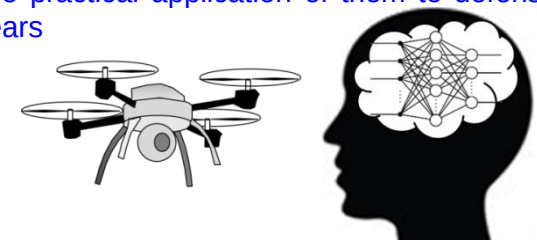
○ Study on a vision of unmanned aerial vehicles with a high level of safety and reliability (¥60 million)
Conduct a feasibility study toward realizing unmanned aerial vehicles for long-distance, out-of-sight operation with emphasis placed on safety and reliability in order to enable operation suited to Japan's geographical features



Study on a vision of unmanned aerial vehicles (image)

Promotion of quick practical application of evolving cutting-edge civilian technologies to defense equipment

○ Initiative to realize quick practical application of new technologies (¥400 million)
Incorporate rapidly-evolving cutting-edge civilian technologies, including drones and artificial intelligence (AI), and pursue practical application of them to defense equipment in a short period of time, around three to five years

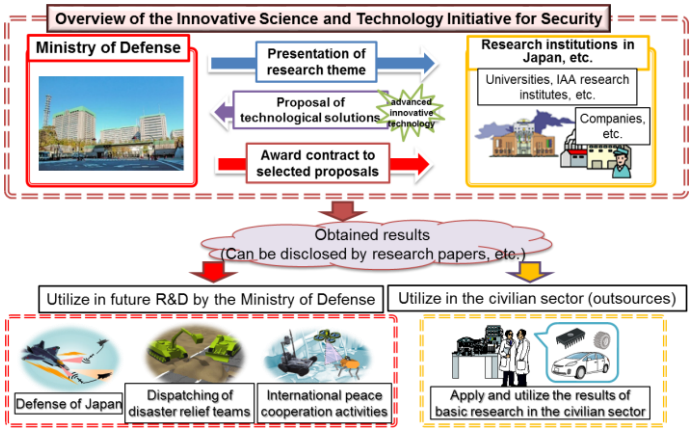


Drone　　Artificial intelligence (AI)

Examples of new technologies to be incorporated into defense equipment (image)

Discovery and promotion of cutting-edge technologies expected to be used for defense applications

○ Innovative Science & Technology Initiative for Security (funding program) (¥11.0 billion)
Established in FY2015 in order to discover ingenious research programs by universities, IAA research institutes, companies, etc. which may be applicable to defense equipment
Expand the Innovative Science & Technology Initiative for Security in FY2017 to promote cutting-edge research programs where large-scale investments are effective from the perspective of the budget amount and the research period



Outline of the Innovative Science & Technology Initiative for Security

Strengthen the technology management system in order to protect Japanese technologies

○ Research concerning technology management (¥90 million)
Conduct research using superior outside knowledge in order to obtain information necessary for appropriately and quickly evaluating sensitivity in strict examination related to the Three Principles on Transfer of Defense Equipment and Technology

Research on the status of the use of private-sector knowledge, etc.

○ Conduct research on the status of the use of private-sector knowledge, etc. in other countries in order to promote defense equipment and technology policies (¥30 million)

2 Promote optimal acquisition through project management under acquisition strategy, etc.

Strengthen project management and steadily promote acquisition programs concerning equipment intended for prioritized project management and also implement initiatives that give consideration to joint operation and standardization

Steadily promote acquisition programs concerning equipment intended for prioritized project management

Promote acquisition at an appropriate cost based on the Acquisition Strategic Plan, which prescribes basic matters concerning acquisition and project management, including lifecycle cost

◯ Acquisition programs concerning equipment intended for prioritized project management
- Type-03 medium range surface-to-air missile (improved), Unmanned Aerial Vehicles (Global Hawk), Amphibious vehicle (AAV7), Tilt-rotor aircraft (V-22), Transport aircraft (C-2), and F-35A fighter aircraft (repost)
- Japan-U.S. cooperative development of Advanced Ballistic Missile Interceptor (SM-3 Block IIA) (repost)

Promote the development of equipment in consideration of the perspective of joint operations

◯ Efficient development based on categorization
- Develop the Type-12 surface-to-ship missile (improved) and a new air-to-ship missile for patrol aircraft based on a new ship-to-ship missile (under development) (repost)
- Develop a new ship-to-air missile based on the Type-03 medium range surface-to-air missile (improved) (repost)

◯ Study on the development of equipment in consideration of the perspective of joint operation (¥3 million)
Conduct a study on application of existing technologies to other defense equipment in order to enhance the operability of the equipment in joint operations among different services and to reduce costs

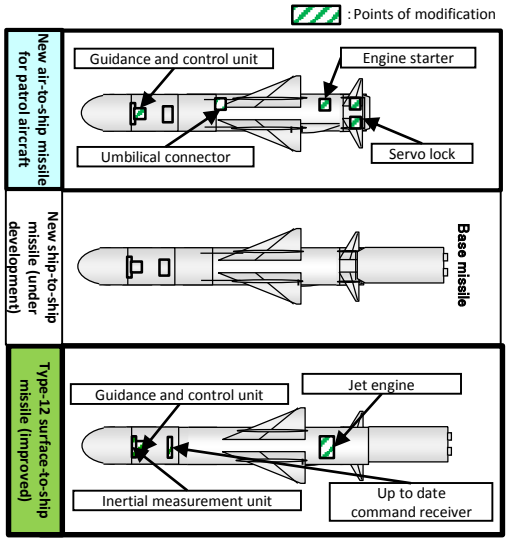


*Image of the standardization of the Type 12 surface-to-ship missile (*improved*) and a new air-to-ship missile for patrol aircraft*

Strengthen project management

◯ Study on enhancing the capabilities to estimate the life cycle cost (¥30 million)

◯ Implement training programs outsourced to outside educational organizations that are intended to develop personnel who possess professional knowledge and skills related to the acquisition of defense equipment (¥30 million)

3 Promote defense equipment and technology cooperation

Strengthen the measures to enhance effective defense equipment and technology cooperation based on in collaboration with the private sectors through information gathering on partner countries' needs, "packaged" cooperation including assistance for maintenance, and enhancement of raising publicity, based on the progress of cooperative projects with the countries

◯ Strategic research intended to realize cooperation suited to other countries' circumstances

- Clarify cooperation partner countries' needs and the feasibility of cooperation by conducting research on their procurement systems and production and technological bases (¥300 million)

- Promoting cooperative projects meticulously with other countries through long-term dispatch of personnel of the Acquisition, Technology and Logistics Agency who engage in defense equipment cooperation (¥40 million)

◯ Promotion of comprehensive cooperation not only equipment itself but also maintenance

- Expenses for dispatching personnel of Japanese maintenance companies as a capacity building assistance measure concerning the maintenance of the TC-90s in the Philippines (¥300 million)

- Dispatching private-sector engineers to ASEAN countries for the purpose of enhancing maintenance capacity (¥30 million)

TC-90 aircraft scheduled to be transferred to the Philippines

◯ Public relations concerning Japanese defense equipment based on collaboration between the government and industries

- Open exhibition booths of the Acquisition, Technology and Logistics Agency at international defense equipment exhibitions and appeal domestic superior technologies possessed by small and medium-sized enterprises (¥100million)

- Conduct research on organizers of international defense equipment exhibitions held abroad and the status of governments' involvement in such exhibitions (¥40 million)

- Host international conferences to promote mutual understanding on defense equipment and technologies (¥20 million)

A booth of the Acquisition, Technology and Logistics Agency (Eurosatory 2016)

◯ Initiative toward conformity with international standards

- Host international conferences and develop systems related to the NATO Codification System(*1) in order to transmit information concerning defense equipment developed in Japan to foreign countries and share such information with them (¥30 million)

*1 NATO Codification System: a system for sharing information concerning equipment among NATO country and Sponsorship of non-NATO countries for the purpose of efficient supply and management of equipment

*2 Most of the expenses for this initiative was integrated into the third supplementary budget of FY2016 (¥170 million).

4 Promote measures to maintain and enhance defense production and technological bases

Regarding the defense industry in a severe environment, promote measures to maintain and strengthen the technological bases, including discovering and using superior technologies possessed by small and medium-sized enterprises and meticulously grasping the conditions of supply chain.

◯ Discovery and use of technologies possessed by small and medium-sized enterprises

- Create opportunities for small and medium-sized enterprises possessing technologies applicable to defense equipment to enter the defense market and match them with the MOD/SDF, making use of exhibitions (¥10 million)

- Discover advanced commercial technologies through a program for quick practical application of new technologies (repost)

Image of an initiative related to small and medium-sized enterprises

◯ Visualize supply chains and respond to risks related to them

- Research to identify risks , including whether there are companies with critical technologies not to be replaced (key supplier),and take necessary measures.(¥70 million)

*Part of the expense for this project was integrated into the third supplementary budget of FY2016. (¥110 million)

◯ Research on a new method of promoting the acquisition reform

- Conduct research on a method of reducing procurement cost of defense equipment by using outside knowledge or by strengthening cooperation between the public and private sectors, and establish a specific procurement system based on this research (¥200 million)

VIII Others

1 Restructuring and organizational quota changes

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

◯ Establishment of the Ground Component Command (provisional name)

Establish the Ground Component Command (provisional name) in order to enable swift and flexible nationwide operation of basic operational units (divisions and brigades) and various units under joint operations

◯ Establishment of the Amphibious Rapid Deployment Brigade (provisional name)

In order to develop sufficient amphibious operational capability to enable the SDF to land, recapture and secure without delay any remote islands that might be invaded, establish the Amphibious Rapid Deployment Brigade (provisional name)

◯ Reorganization into rapid deployment divisions and rapid deployment brigades

Reorganize the 8th Division and the 14th Brigade into a rapid deployment division and a rapid deployment brigade which are both equipped with advanced mobility and surveillance capability in order to enable them to respond swiftly to and deal effectively with various situations

◯ Establishment of the GSDF Education, Training, Research and Development Command (provisional name)

Establish the GSDF Education, Training, Research and Development Command (provisional name) in order to enhance the GSDF's education, training and research functions

◯ Establishment of the GSDF Intelligence School (provisional name)

Establish the GSDF Intelligence School (provisional name) in order to enhance intelligence education in the GSDF

◯ Establishment of the Southwestern Air Defense Force (provisional name)

Abolish the Southwestern Composite Air Division and establish the Southwestern Air Defense Force (provisional name) in order to enhance the air defense posture in the southwestern region

◯ Request for increase in the number of SDF personnel

Increase the number of SDF personnel in order to enhance the response capability against ballistic missiles and the surveillance capability in the southwestern region in order to improve the readiness to quickly respond to various situations

	GSDF	MSDF	ASDF	JSO and others	Total
Request for increase in the number of personnel	＋５８	＋１２８	＋１１８	＋６	＋３１０

◯ Organizational quota changes

- Establish the Komatsu Defense Office (provisional name) under the Kinki-Chubu Defense Bureau in order to swiftly and politely respond to requests from local governments in relation to the transfer of Tactical Fighter Training Group to the Komatsu Base
- Establish the Office of Practical Use of New Technology (provisional name) under the technology planning officer of the Technology Strategy Division of the Acquisition, Technology and Logistics Agency in order to promote quick realization of practical application of evolving cutting-edge consumer technologies to defense equipment

2 Tax reform

○ Extension of special measures such as an exchange of business asset related to the aircraft noise reduction project (relocation measure) [income tax and corporate tax]

- A three-year extension of the special measure related to the tax on income from sale when selling business asset owned in aircraft noise impact areas (Type II area as specified under the provision of Article 5, Paragraph 1 of the Act on the Improvement of the Living Environment in Areas Surrounding Defense Facilities) around defense facilities in exchange for property in other location.

○ Establishment of a special tax exemption measure when providing tax-exempt light-oil based on the U.S. and Others' Military Actions Related Measures Act, etc.

[light-oil delivery tax]

- Introduce measures with which tax-exempt light-oil provided for foreign armed forces etc, based on the U.S. and Others' Military Actions Related Measures Act etc,* is not subject to deemed taxation in light-oil delivery tax.

*The Act Concerning Measures to Ensure Peace and Security of Japan in Situations that Will Have an Important Influence on Japan's Peace and Security, the Ship Inspection Operations Act, the U.S. and Others' Military Actions Related Measures Act, and the International Peace Support Act.

○ Expansion of a special tax exemption measure when providing tax-exempt light-oil based on ACSA

[light-oil delivery tax]

- Expand measures which are not covered by deemed taxation in light oil delivery tax when providing tax-exempt light-oil for other foreign armed forces, when a new ACSA is likely to be approved within FY2017, as in the case of tax-exempt light-oil for ships provided as logistic support based on the Japan-Australia ACSA.

○ Expansion of a special deduction of corporate tax when conducting experimental research
(joint request: Ministry of Economy, Trade and Industry, etc.)

[income tax, corporate tax and corporate inhabitant tax]

- As for deduction rate for the total expenses of research, introduce a system enables floating deduction rate according to the expenses (large enterprises: 6~14%, small and medium-sized companies: 12~17%).
- As for additional deduction measures, extend high-level type* for two years.

*deduction type applied when the ratio of research cost to profit exceeds 10%.

Major equipment

1 Major equipment

Procurement type				FY2016 Number procured	FY2017 Number procured	FY2017 Amount (¥100 million)
Aircraft	GSDF	Tilt-rotor aircraft (V-22)		4	4	391
		CH-47JA		—	6	445 (63)
	MSDF	Patrol helicopter (SH-60K)		17	—	—
		Life extension of fixed-wing patrol aircraft (P-3C)		(3)	(3)	18
		Life extension of patrol helicopter (SH-60K)		(1)	(2)	38
		Life extension of patrol helicopter (SH-60J)		(2)	(2)	10
		Life extension of imagery intelligence gathering aircraft (OP-3C)		(—)	(1)	7 (1)
		Capability improvement of radars mounted on fixed-wing patrol aircraft (P-3C)	Upgrade	(10)	(15)	5
			Parts	(7)	(—)	
	ASDF	Fighter aircraft (F-35A)		6	6	880
		Improvement of air-to-air combat capability of fighter aircraft (F-2)	Upgrade	(9)	(16)	53
			Parts	(12)	(9)	
		Additional installment of JDCS function to fighter aircraft (F-2)		(4)	(12)	
		Transport aircraft (C-2)		—	3	553 (17)
		Rescue helicopter (UH-60J)		8	—	—
		New airborne early-warning aircraft (E-2D)		1	—	—
		Improvement of the capability of Airborne Warning And Control Systems (AWACS) (E-767)	Upgrade	(—)	(2)	220
			Parts	(1)	(—)	
		Flight check aircraft (Citation 680A)		—	2	95
		New aerial refueling and transport aircraft (KC-46A)		—	1	299
	Joint Unit	Unmanned Aerial Vehicle (Global Hawk)		—	1	168
Vessel	MSDF	Aegis-equipped destroyer (DDG)		1	—	—
		Submarine (SS)		1	1	728 (72)
		Ocean minesweaper (MSO)		—	1	177 (14)
		Ocean surveillance (AOS)		—	1	224 (3)
		Life extension of Asagiri-class destroyer	Work	(—)	(1)	6
			Parts	(3)	(4)	
		Life extension of Abukuma-class destroyer	Work	(—)	(2)	15
			Parts	(—)	(—)	
		Life extension of Hatakaze-class destroyer	Work	(—)	(1)	16
			Parts	(1)	(—)	
		Life extension of Kongo-class destroyer	Work	(—)	(1)	18
			Parts	(1)	(—)	
		Life extension of Oyashio-class submarine	Work	(4)	(3)	37
			Parts	(4)	(6)	
		Life extension of Landing Craft Air Cushion	Work	(2)	(2)	1
			Parts	(—)	(—)	
		Life extension of Kurobe-class training support vessel	Work	(—)	(1)	4
			Parts	(1)	(—)	
		Life extension of Towada-class fast combat support ship	Work	(1)	(—)	2
			Parts	(—)	(2)	
		Capability improvement of short-range SAM system on Takanami-class destroyer	Work	(—)	(—)	—
			Parts	(5)	(—)	
		Modernization of destroyer CIWS (high-performance 20mm autocannon)	Work	(4)	(4)	44
			Parts	(—)	(12)	

Procurement type				FY2016 Number procured	FY2017 Number procured	FY2017 Amount (¥100 million)
Vessel	MSDF	Improvement in anti-submarine capability of Atago-class destroyer (MFTA)	Work	(1)	(—)	—
			Parts	(1)	(—)	
		Improvement in anti-submarine capability of Akizuki-class destroyer, etc. (multistatic)	Work	(1)	(—)	2
			Parts	(—)	(3)	
		Improvement in anti-submarine capability of Murasame-class destroyer (surface vessel torpedo tubes)	Work	(—)	(1)	0.5
			Parts	(—)	(2)	
		Modernization of command system of Asagiri-class destroyer	Work	(—)	(1)	4
			Parts	(5)	(—)	
		Modernization of command system of Takanami-class destroyer	Work	(1)	(—)	—
			Parts	(3)	(—)	
		Modernization of command system of Murasame-class destroyer	Work	(—)	(—)	3 (1)
			Parts	(—)	(1)	
		Modernization of command system of Hyuga-class destroyer	Work	(—)	(—)	26 (2)
			Parts	(—)	(1)	
		Modernization of command system of Oyashio-class submarine	Work	(—)	(1)	23 (1)
			Parts	(2)	(1)	
		Improvement in capability of Osumi-class LST	Work	(1)	(1)	12
			Parts	(1)	(1)	
Missile	GSDF	Type-03 middle-range surface-to-air missile (modified)		—	1 company	174 (150)
		Type-11 short-range surface-to-air missile		1	1	43
		Middle-range multi-purpose missile		12 sets	5 sets	44
		Type-12 surface-to-ship missile		1	1	81 (1)
	ASDF	Surface-to-air missile for base air defense		—	0.5	28
Firearm, vehicle, etc.	GSDF	Type-89 rifle		3,000	2,300	9
		Anti-personnel sniper rifle		—	6	0.1
		5.56mm machine gun MINIMI		30	48	2
		60mm mortar (B)		1	5	0.2
		84mm recoilless rifle (B)		6	3	0.3
		81mm mortar L16		1	1	0.1
		120mm mortar RT		5	6	3
		Type-99 155mm self-propelled howitzer		6	6	65
		Type-10 tank		6	6	75
		Amphibious vehicle (AAV7)		11	11	85
		Type-16 mobile combat vehicle		36	33	233
		Vehicle, communications equipment, facility equipment, etc.		310 (7)	—	211 (29)
BMD	MSDF	Upgrade of the capability of Aegis-equipped destroyers		(2)	(1)	58 (1)

Note 1: The procurement amount for FY2016 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 FY2017. (The period for acquiring the item varies by equipment, but can take between two to five years.)
Note 4: The number in brackets represents the number related to upgrading the existing commissioned equipment.
Note 5: Regarding the procurement for the capability improvement of radars mounted on fixed-wing patrol aircraft (P-3C), improvement of air-to-air combat capability of fighter aircraft (F-2), improvement in capability of Airborne Warning And Control Systems (AWACS) (E-767), capability improvement of short-range SAM system on Takanami-class destroyer, modernization of destroyer CIWS (high-performance 20mm autocannon), improvement in anti-submarine capability of Atago-class destroyer (MFTA), improvement in anti-submarine capability of Akizuki-class destroyer, etc. (multistatic), improvement in anti-submarine capability of Murasame-class destroyer (surface vessel torpedo tubes), modernization of command system of Asagiri-class destroyer, modernization of command system of Takanami-class destroyer, modernization of command system of Murasame-class destroyer, modernization of command system of Hyuga-class destroyer, modernization of command system of Oyashio-class submarine, and improvement in capability of Osumi-class LST, the upper figure represents the procurement of modification and work services for the existing commissioned equipment, while the lower figure represents the number of parts, etc. necessary for the capability improvement. One set to be procured for improvement in the capability of Airborne Warning and Control Systems (E-767) in FY2016 indicates a portion of the parts, etc. necessary for improving the capabilities of four aircraft. Regarding the volume of procurement for the service life extension of vessels, the upper figure represents the number of ships subject to service life extension work and the lower figure represents the number of parts procured for service life extension work.
Note 6: The number of procurements for the upgrade of the capability of Aegis-equipped destroyers represents the number of procurements for upgrading two Atago-class destroyers with Ballistic Missile Defense (BMD) capability, which started in FY2012.

2. Major research and development programs

	Item	Overview	FY2017 Amount (¥100 million)
New	Development of a new ship-to-air missile	Develop a long-range ship-to-air missile capable of countering enemy aircraft, etc. in order to strengthen the air defense capability of destroyers (standardization based on the Type-03 medium range surface-to-air missile (improved))	90
	Development of the Type-12 surface-to-ship missile (modified) and a new air-to-ship missile for patrol aircraft	Develop the Type-12 surface-to-ship missile (modified) with upgraded functions and performance, including a longer range compared with existing missiles and a new air-to-ship missile for patrol aircraft in order to enhance the capability to counter enemy surface vessels, etc. (standardization based on a new ship-to-ship missile (under development))	115
	Research on cyber resilience technology to strengthen the response capability against cyber attacks, etc.	Conduct research intended to continue operation of the information and communication infrastructure of the MOD/SDF in the event of cyber attacks	7
	Research on autonomous surveillance technology and a sensor system for unmanned underwater surveillance vehicles	Conduct research on autonomous surveillance technology and a sensor system used in unmanned underwater vehicles that will significantly enhance the underwater surveillance capability	9
	Research on future amphibious technology	Conduct research concerning a whole system design using a simulation model and the reduction of the size of high-power engines in order to enhance sea-surface mobility	24

3. Changes in the number of SDF personnel

● Changes in the number of SDF personnel, etc.

(Unit: Person)

	End of FY2016	End of FY2017	Change
GSDF	158,938	158,931	△7
Regular personnel	150,863	150,856	△7
Ready reserve personnel	8,075	8,075	0
MSDF	45,364	45,363	△1
ASDF	46,940	46,942	2
Joint units	1,253	1,259	6
Joint Staff Office	368	368	0
Defense Intelligence Headquarters	1,911	1,911	0
Internal Bureau	48	48	0
Acquisition Technology and Logistics Agency	407	407	0
Total	247,154	247,154	0
	(255,229)	(255,229)	(0)

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

● Number of SDF personnel (annual average)

(Unit: Person)

	GSDF	MSDF	ASDF
Annual average	139,893	42,094	43,350

● 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

● Change in number of administrative officials, etc.

(Unit: Person)

	FY2016	FY2017	Remarks
Increase	166	179	
Rationalization, etc.	△266	△266	
Total	△100	△87	
Number at the end of FY	21,066	20,979	

Note 1: Including the Minister, State Minister, two Parliamentary Vice-Ministers, and Senior Adviser to the Minister

Reference

Composition of defense-related expenses

Expenditures: ¥4,899.6 billion
[Personnel and provisions expenses + obligatory outlay expenses+ general material expenses]

(Fiscal Year)

FY2013 FY2014 FY2015 FY2016 FY2017 FY2018 FY2019 FY2020 FY2021

Personnel and provisions expenses
Expenses related to personnel salary, retirement allowance, meals, etc.

¥2,166.2 billion

Material expenses (program expenses)
Expenses related to the procurement, repair and maintenance of equipment; purchase of fuel; education and training of SDF personnel; facility construction and maintenance; utilities such as lighting, heat and water; research and development of technology; and expenses related to base measures, including measures to mitigate the impact on communities around bases and cost-sharing for the stationing of USFJ

Obligatory outlay expenses
Expense paid in FY2017 in accordance with contracts concluded before FY2016

General material expenses (activity expenses)
Expense paid in FY2017 in accordance with contracts concluded in FY2017

Future obligations (existing portions)
Expenses to be paid after FY2018, based on the contract before FY2016 stating that payment shall be made sometime in the future (within five years, in principle)

Contract for FY2013

Contract for FY2014

Contract for FY2015

¥1,736.4 billion

Contract for FY2016

Material Expenses (on contract base)
[General material ¥2,967.0 billion expenses + future obligations concerning new contracts]

Contract for FY2017

¥1,970.0 billion

¥997.0 billion

Future obligations concerning new contracts
Expenses to be paid after FY2018 for projects requiring several years to be completed, such as procurement of major equipment like ships and aircraft, construction of hangers and barracks, etc., based on a contract stating that payment shall be made sometime in the future (within five years, in principle)

Notes:
1. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.
2. This chart is a rough diagram. The length of a box does not necessarily correspond to the actual amount of expenses.
3. Future obligations concerning new contracts include expenses to be paid after FY2022 in association with long-term contracts for the procurement of equipment.

[Details and classification of material expenses (program expenses)] (Unit: ¥100 million)

FY2017		Expenditure base	Contract base
Material expenses (program expenses)		27,334	29,670
	Obligatory outlay expenses	17,364	
	General material expenses (Activity expenses)	9,970	9,970
	Future obligation concerning new contracts		19,700

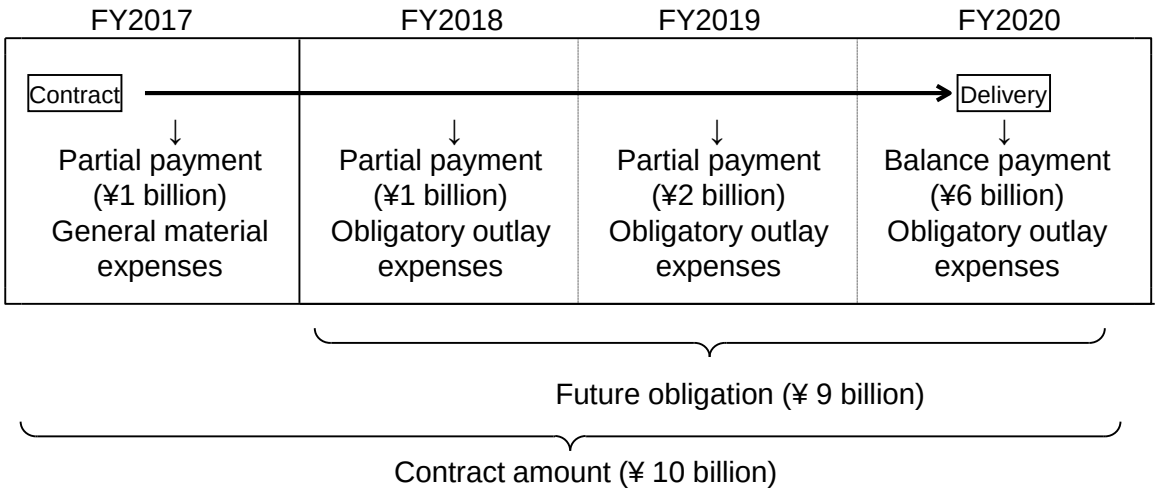
○ Expenditure base: Total amount to be paid in the current fiscal year for projects like acquisition of equipment and facility development. Specifically, it is the sum of the expenses to be paid in FY2017 (general material expenses) based on the contracts concluded in FY2017 and the expenses to be paid in FY2017 (obligatory outlay expenses) based on the contracts concluded before FY2016. 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 acquisition of equipment and facility development. Specifically, the sum of the expenses to be paid in FY2017 and the expenses to be paid after FY2018 (future obligation pertaining to new contracts) based on the contracts concluded in FY2017. 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.

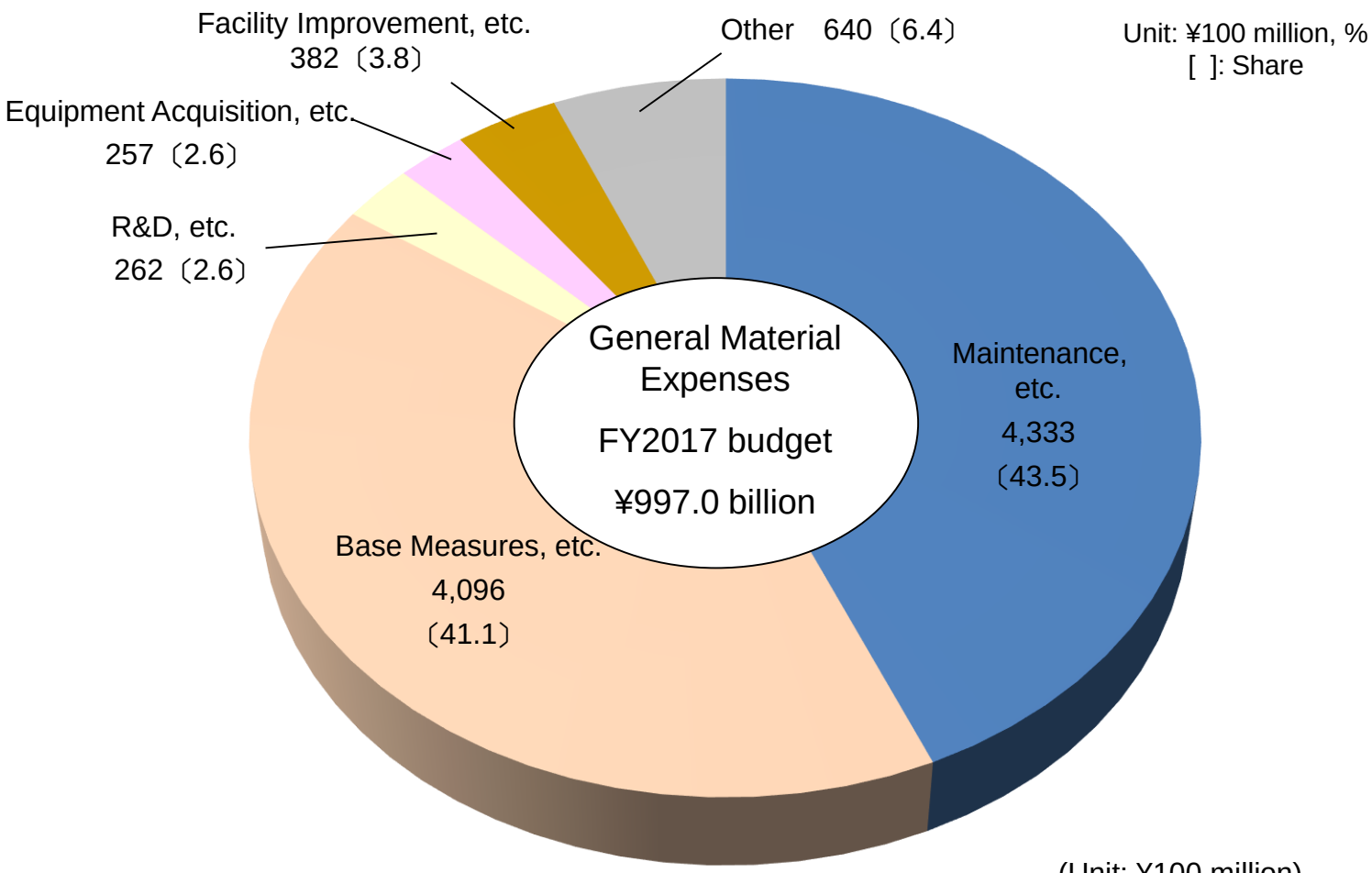
Concept of Future Obligation

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

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



Details of General Material Expenses (Activity Expenses)

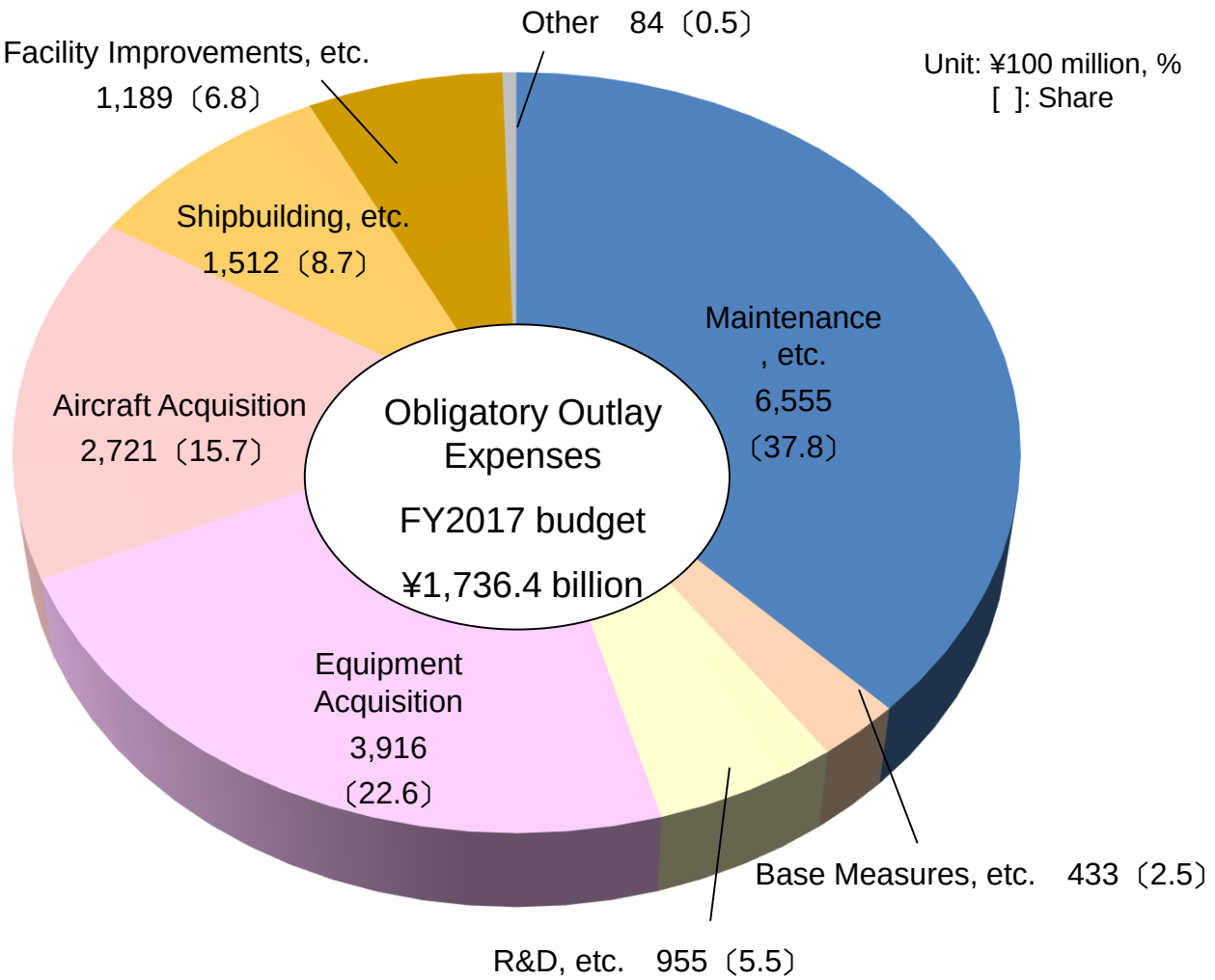


(Unit: ¥100 million)

Item	FY2016	FY2017	YoY Change
Maintenance, etc.	4，267	4，333	66
・Petrol	1，025	735	△290
・Repair	1，724	2，065	341
・Education & Training	290	300	10
・Medical Care, etc.	267	272	5
・Utilities	960	960	△0
Base Measures, etc.	4，081	4，096	15
・Community Grants	956	950	△6
・Host Nation Support	1，768	1，788	20
・Rent, Compensation Costs, etc.	1，358	1，359	1
Research & Development	275	262	△13
Equipment Acquisition, etc.	330	257	△72
Facility Improvements, etc.	359	382	22
Other (computer rentals, etc.)	635	640	4
Total	9，948	9，970	22

Note: 1. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.

Details of Obligatory Outlay Expenses



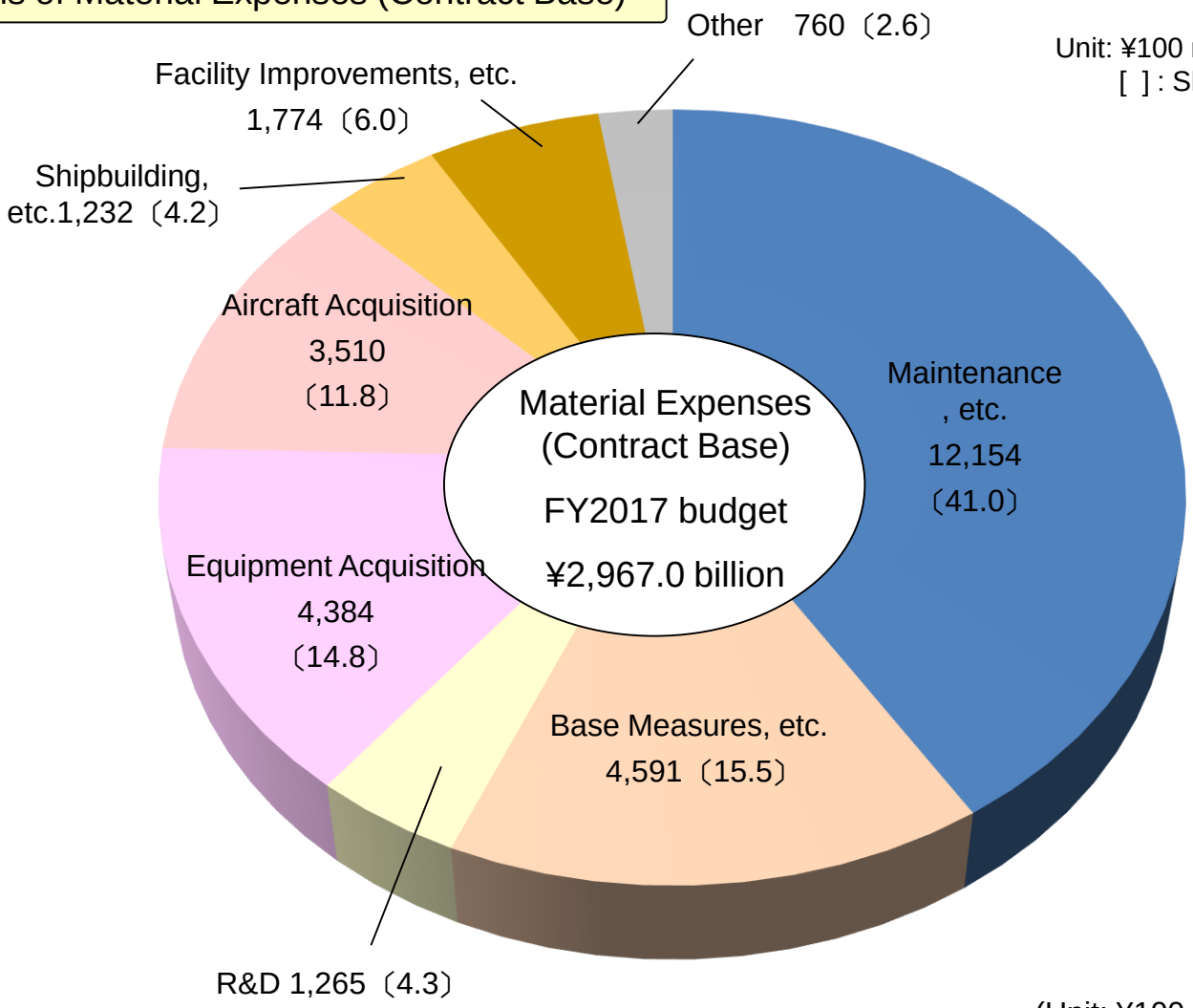
(Unit: ¥100 million)

Item		FY2016	FY2017	YoY Change
Maintenance, etc		7，440	6，555	△885
	Repair	7，062	6，178	△883
	Education & Training, etc.	378	377	△1
Base Measures		428	433	5
Research & Development		780	955	175
Equipment Acquisition		3，789	3，916	127
Aircraft Acquisition		1，893	2，721	828
Shipbuilding, etc.		1，647	1，512	△136
Facility Improvements, etc.		1，102	1，189	87
Other (computer rentals, etc.)		108	84	△25
Total		17，187	17，364	177

Note: 1. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.

Details of Material Expenses (Contract Base)

Unit: ¥100 million, %
[ ] : Share

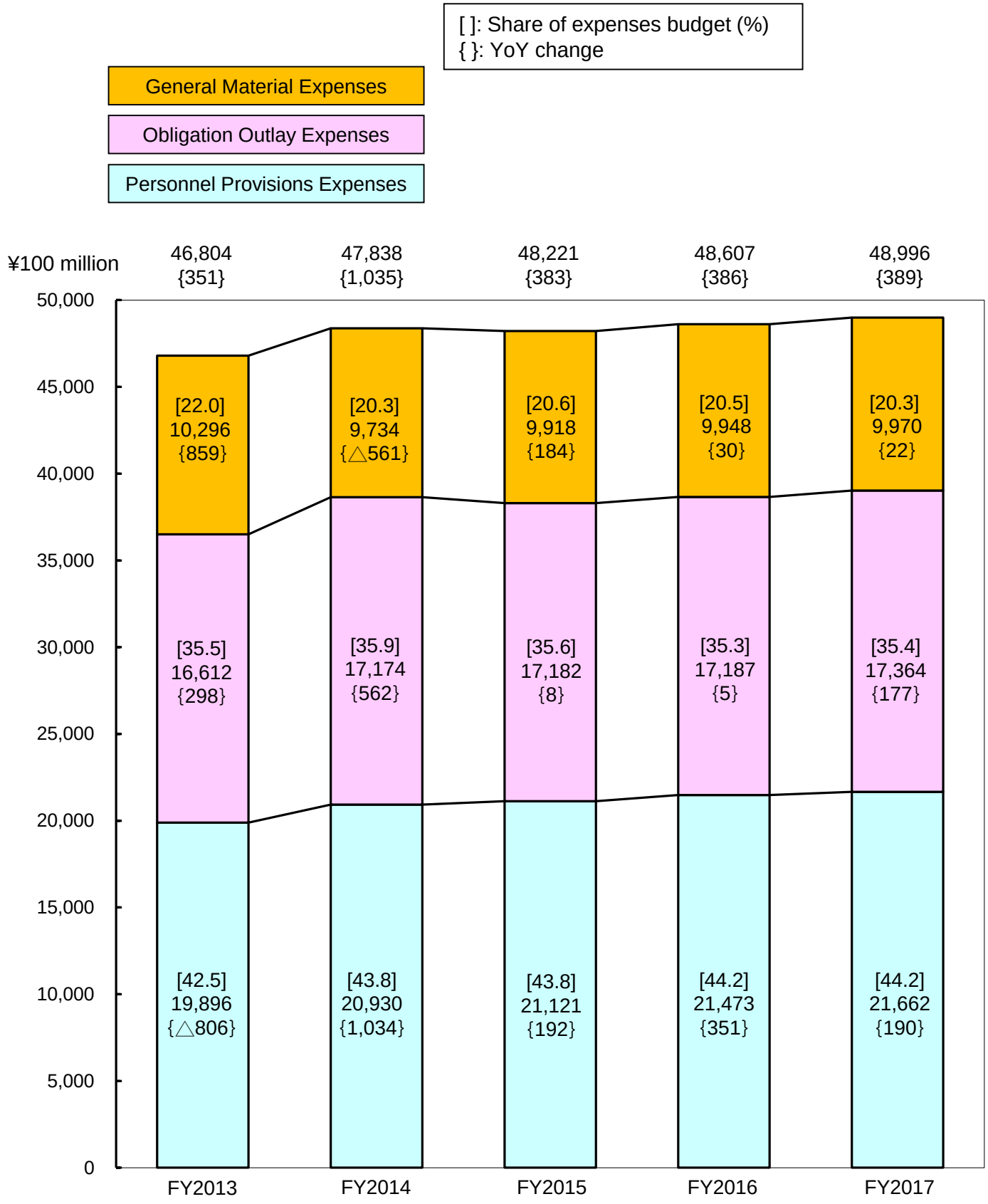


(Unit: ¥100 million)

Item	FY2016	FY2017	YoY Change
Maintenance, etc.	11,656	12,154	498
Petrol	1,025	735	△290
Repair	8,818	9,651	833
Education & Training, etc.	1,812	1,768	△45
Base Measures, etc.	4,536	4,591	55
Research & Development	1,211	1,265	55
Equipment Acquisition	5,203	4,384	△819
Aircraft Acquisition	4,232	3,510	△722
Shipbuilding, etc.	1,567	1,232	△335
Facility Improvements, etc.	1,541	1,774	233
Other (computer rentals, etc.)	803	760	△42
Total	30,748	29,670	△1,078

Note: 1. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.

Changes in the three categories



Notes: 1. The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.
2. General material expenses of FY2013 include expenses to be transferred to the Special Account for the Reconstruction from the Great East Japan Earthquake (¥68.9 billion).

Breakdown by organization

(Unit: ¥100 million, %)

Classification	FY2016 Budget	FY2017 Budget	Change	Growth rate
Defense-related expenses	４８，６０７	４８，９９６	３８９	０．８
Ministry of Defense	４８，６０７	４８，９９６	３８９	０．８
(Ministry of Defense Head Office)	４７，１５２	４７，３２５	１７４	０．４
GSDF	１７，４８９	１７，７０６	２１７	１．２
MSDF	１１，９５４	１１，５４８	△４０７	△３．４
ASDF	１１，１９６	１１，５７８	３８２	３．４
Subtotal	４０，６４０	４０，８３２	１９２	０．５
Internal Bureau	４，９４１	４，９６５	２５	０．５
Joint Staff Office	４０７	４０２	△５	△１．１
Defense Intelligence Headquarters	７０２	６９４	△７	△１．０
National Defense Academy	１５９	１６１	２	１．０
National Defense Medical College	２４６	２３９	△６	△２．６
National Institute for Defense Studies	５３	２６	△２７	△５０．８
Inspector General’s Office of Legal Compliance	５	６	１	１１．５
Subtotal	６，５１２	６，４９４	△１８	△０．３
(Regional Defense Bureaus)	１９３	１９８	５	２．６
(Acquisition, Technology and Logistics Agency)	１，２６３	１，４７３	２１０	１６．６

Note: The figures do not include SACO-related expenses, U.S. Forces realignment-related expenses (the portion allocated mitigating the impact on local communities) and expenses for the introduction of new dedicated government aircraft.

Promotion of base measures, etc.

(Unit: ¥100 million, %)

Classification	FY2016 Budget	FY2017 Budget	YoY Change	Growth rate	Remarks
Promotion of base measures, etc.	< 4,536 > 4,509	< 4,591 > 4,529	< 55 > 20	< 1.2 > 0.4	
(1) Expenses related to measures for local communities	< 1,227 > 1,192	< 1,245 > 1,220	< 18 > 28	< 1.5 > 2.4	
Residential sound insulation	< 375 > 376	< 375 > 376	< 0 > 0	< 0.1 > 0.1	Subsidies for sound insulation work near air bases
Improvement of surrounding environment	< 852 > 816	< 869 > 844	< 18 > 28	< 2.1 > 3.4	Subsidies for living environment and facilities (river and road reconstruction, sound proofing systems in schools, improvements to public welfare facilities, etc.)
(2) Cost-sharing for the stationing of USFJ	< 1,933 > 1,920	< 1,962 > 1,946	< 30 > 26	< 1.5 > 1.3	
Special Measures Agreement	1,450	1,473	23	1.6	
Labor cost	1,194	1,219	25	2.1	Cost of wages of USFJ employees
Utilities	249	247	△ 2	△ 1.0	Cost of utilities used at USFJ facilities
Training relocation cost	7	8	1	15.2	Expenses related to U.S. field-carrier landing practice on Iwo Jima
Facilities improvement	< 218 > 206	< 222 > 206	< 4 > —	< 1.8 > —	Improvement of USFJ facilities (barracks, family housing, etc.)
Measures for USFJ employees	264	267	3	1.0	Expenses related to social insurance premiums by the employer
(3) Facility rentals, compensation expenses, etc.	< 1,376 > 1,397	< 1,384 > 1,363	< 8 > △ 34	< 0.6 > △ 2.4	Rental cost of land used for defense facility and compensation for loss of fisher's income, etc.

Note: The above figures are on an expenditure base (General Material Expenses + Obligatory Outlay Expenses), and figures in < > indicate a contract base amount.

Expenses Related to the Special Action Committee in Okinawa (SACO)

(Unit: ¥100 million, %)

Item	FY2015 Budget	FY2016 Budget	YR/YR	Growth rate	Remarks
					Implementation of measures included in the Special Action Committee on Okinawa (SACO) Final Report
1 Program for and restitution	< 5 > 7	< 14 > 7	< 8 > △ 0	< 2.6 > △0.1	Relocation work and compensation of expenses for relocating U.S. facilities and returning land
2 Programs for improvements of drills	< 13 > 13	< 18 > 15	< 4 > 2	< 34.1 > 17.4	Personnel transportation etc. associated with relocation of live-fire training over Okinawa Prefectural Highway 104 to maneuver areas on the mainland of Japan
3 Program for noise abatement	< 5 > 8	< 3 > 5	< △ 2 > △ 2	< △41.7 > △29.2	Implement noise reduction initiatives
Total	< 24 > 28	< 35 > 28	< 11 > 0	< 44.6 > 0.2	

The Portion Allocated for Reducing the Impact on Local Communities in the U.S. Forces Realignment-related Expenses

(Unit：¥100 million, %)

Item	FY2016 Budget	FY2017 Budget	YoY Change	Growth Rate	Remarks
					Promotion of measures to appropriately and promptly implement realignment measures based on “Government’s undertakings regarding the review of the force configuration, etc. of the U.S. Forces in Japan” (approved by the Cabinet on May 30, 2006) and “Government’s present undertakings regarding the items approved at the Japan-United States Security Consultative Committee on May 28, 2010 (approved by the Cabinet on May 28, 2010)
1 Projects for relocation of U.S. Marine personnel from Okinawa to Guam	140	265	124	88.5	Funding for the projects for U.S. Marine Corps in Okinawa to relocate to Guam
2 Programs for realignment on Okinawa	< 1,812 690 >	< 1,760 636 >	< △ 52 △ 55 >	< △ 2.8 △ 7.9 >	
(1) Relocation of MCAS Futenma	< 1,707 595 >	< 1,704 536 >	< △ 3 △ 59 >	< △ 0.2 9.9 >	Projects regarding the relocation of MCAS Futenma
(2) Return of lands south of Kadena	< 105 95 >	< 56 99 >	< △ 49 4 >	< △ 46.6 4.5 >	Programs regarding the return of lands south of Kadena Air Base
3 Projects related to the transformation of the U.S. Army Command	0	—	△ 0	Program ended	Projects regarding the return, etc. of the portion of areas, facilities, etc. in the Sagami General Depot
4 Projects for the relocation of carrier air wing	< 608 724 >	< 181 913 >	< △ 427 189 >	< △ 70.2 26.1 >	
(1) MCAS Iwakuni	< 585 712 >	< 179 902 >	< △ 406 190 >	< △ 69.4 26.7 >	Projects regarding the relocation of elements of Carrier Air Wing from Atsugi Air Facility to MCAS Iwakuni
(2) Facilities etc. for Field Carrier Landing Practice (FCLP)	< 1 1 >	< 2 0 >	< 1 △ 1 >	< 2.9 times △ 99.1 >	Projects related to the facilities etc. for Field Carrier Landing Practice (FCLP)
(3) MSDF Kanoya Base	< 22 11 >	< 0 10 >	< △ 22 △ 1 >	< △ 99.9 △ 6.4 >	Projects related to the rotational deployment of KC-130 squadron to MSDF Kanoya Base
5 Projects for emergency use	< — — >	< 15 6 >	< 15 6 >	< New program New program >	Projects related to emergency use of the facilities and relevant maintenance
6 Projects for training relocation	59	72	13	21.1	
7 Projects to facilitate realignment measures	152	121	△ 31	< △ 20.5 >	Relocation of training for U.S. aircraft to mainland Japan and Guam from Kadena Air Base and other airfields
(1) Realignment grant	129	71	△ 58	△ 44.9	
(2) Measures for the surroundings of bases, etc.	23	50	27	< 2.1 times >	
Total	< 2,771 1,766 >	< 2,413 2,011 >	< △ 358 245 >	< △12.9 13.9 >	

Overview of The Third Supplementary Budget for FY2016 (Ministry of Defense)

Securing stable operation of JSDF・・・¥170.6 billion

(1) Response to ballistic missile attacks・・・¥33.1billion

North Korea launched over 20 ballistic missiles in 2016, marking an unprecedented frequency, and is aiming to further improve its ballistic missile technology and operation capabilities. Since it is an urgent necessity to respond to this tendency, MOD/SDF is promoting relevant projects as promptly as possible.

◯Introduction of Advanced Interceptor missiles (PAC-3MSE)
◯Upgrade of the capability of Aegis-equipped destroyers, etc.
◯Research on a future ballistic missile interception system

PAC-3MSE missile

Atago-class destroyer

(2) Others・・・¥137.5 billion

Considering surrounding security environment and frequent occurrence of natural disasters, secure stable operation of JSDF, whose areas of activity is expanding.

◯Development of destroyers, submarines, patrol aircraft(P-1), etc., and procurement of air-rescue amphibian aircraft US-2, intelligence equipment, counter disaster equipment, etc.
◯Securing the expenses for the parts and repairment of equipment, seismic strengthening of buildings, etc.
◯Securing the expenses for PKO extension.

*In addition to above, the supplementary budget covers ¥5.5 billion for MOD/SDF personnel salary increase and ¥800 million for recovery of disaster-stricken facilities. In total, the supplementary budget for the Ministry of Defense amounts to ¥176.9 billion.

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Defense Programs and Budget of Japan

Overview of FY2017 Budget

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