防 衛 省

Ministry of Defense

Defense Programs and Budget of Japan

"First Year" Budget for Fundamental Reinforcement of Defense Capabilities

Overview of FY2023 Budget

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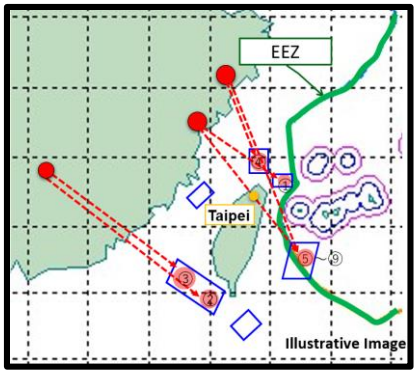
Concept of Defense-Related Expenditures for FY2023

Changes in the Strategic Environment

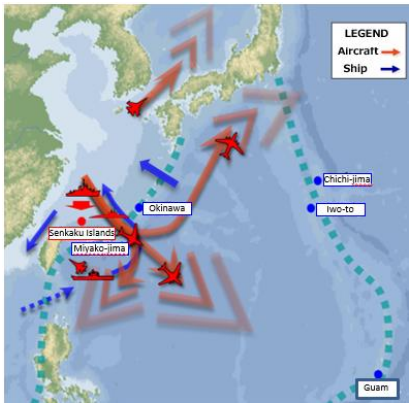
○ Unilateral changes to the status quo by force and such attempts represent significant challenges to the free and open international order
○ Russia's aggression against Ukraine has revealed this in a most blatant way. The international community is facing the greatest post-war trial yet, and has entered a new era of crisis
○ Rapid advances in science and technology are fundamentally changing the paradigm of security

Regional Military Trends

① China's current external stance, military activities, and other activities have become a matter of serious concern for Japan and the international community, and present an unprecedented and the greatest strategic challenge in ensuring the peace and security of Japan and the peace and stability of the international community, as well as in strengthening the international order based on the rule of law, to which Japan should respond with its comprehensive national power including defense capability and in cooperation and collaboration with its ally, like-minded countries and others.



Nine ballistic missiles were launched on August 4, 2022
(Five of them landed within Japan's EEZ)



Chinese military's activities in the areas surrounding Japan have rapidly expanded and intensified

② North Korea has intensified missile launches, and its military activities pose an even more grave and imminent threat to Japan's national security than ever before.

New ICBM-class ballistic missile "Hwasong-17"

Ballistic missile referred to by North Korea as "hypersonic missile"

③ Russia's aggression against Ukraine has shaken the very foundation of the international order. Russia's military activities in the Indo-Pacific region including Japan, together with its strategic coordination with China, are of strong concern from a defense perspective.

Armored vehicles of the Russian Forces in Ukraine

Ukraine responding to Russian disinformation

➢ Japan would also need to operate in a swift as well as persistent manner to crush the opponent's will to invade.

Concept of Defense-Related Expenditures for FY2023

○ In the "Defense Buildup Program," in accordance with the "National Defense Strategy," Japan will fundamentally reinforce its "Multi-Domain Defense Force," through the synergy of organically integrated capabilities including space, cyber, and electromagnetic domains, and is capable of sustained conduct of flexible and strategic activities during all phases from peacetime to armed contingencies, focusing on the capabilities of our opponents and new ways of warfare. By FY2027 or by five years from now, Japan will reinforce its defense capabilities to the point at which Japan is able to take the primary responsibility for dealing with invasions against its nation, and disrupt and defeat such threats while gaining support of its ally and others.

○ For the first year of building a fundamentally reinforced defense capabilities, the necessary expenses have been accumulated.

Key Fields for Fundamental Reinforcement of Defense Capabilities

➢ Japan needs capabilities with which to disrupt and defeat invading forces over long distances, thereby deterring invasion itself.

①Stand-off defense capabilities

②Integrated air and missile defense capabilities

➢ Should deterrence fail and an invasion of Japan occur, Japan would need to ensure asymmetric advantage by leveraging, in addition to these capabilities, manned as well as unmanned assets and gain superiority across domains such as underwater, surface, and air.

③Unmanned defense capabilities

④Cross-domain operation capabilities

⑤Command and control/ Intelligence-related functions

➢ Japan would also need to operate in a swift as well as persistent manner to crush to the opponent's will to invade.

⑥Mobile deployment capabilities / Civil protection

⑦Sustainability and Resiliency

Defense-Related Expenditures for FY2023 ("First Year" Budget for Fundamental Reinforcement of Defense Capabilities)

○ The FY2023 budget plan **has the contents and amount appropriate for the first year of the new "Defense Buildup Program,"** based on the accumulation of measures to reinforce the defense capabilities within five years. ***("First Year" Budget for Fundamental Reinforcement of Defense Capabilities).***

- **The expenditure budget** amounts to **¥6,600.1 billion**, which **increased by 27.4 %** compared to FY2022 (**¥6,821.9 billion if expenses such as US Forces realignment expenses are included**).

  A "substantial increase of defense budget" was achieved.

- Future obligations concerning new contracts **for the new defense build-up program** amounts to **¥7,067.6 billion**. Considering procurement takes several years, **contracts need to be made as much as possible in the first year** to deliver equipment to SDF units swiftly.

○ The budget for core areas of future defense capabilities, such as **stand-off defense capabilities and "unmanned defense capabilities"**, **was substantially increased**. **The budget for integrated air-defense missile capabilities, cross-domain operation capabilities including ones in cyber and space domains, command and control and intelligence-related functions, mobile deployment capabilities, sustainability and resiliency, production and technology basis, etc. was secured at the required amount.**

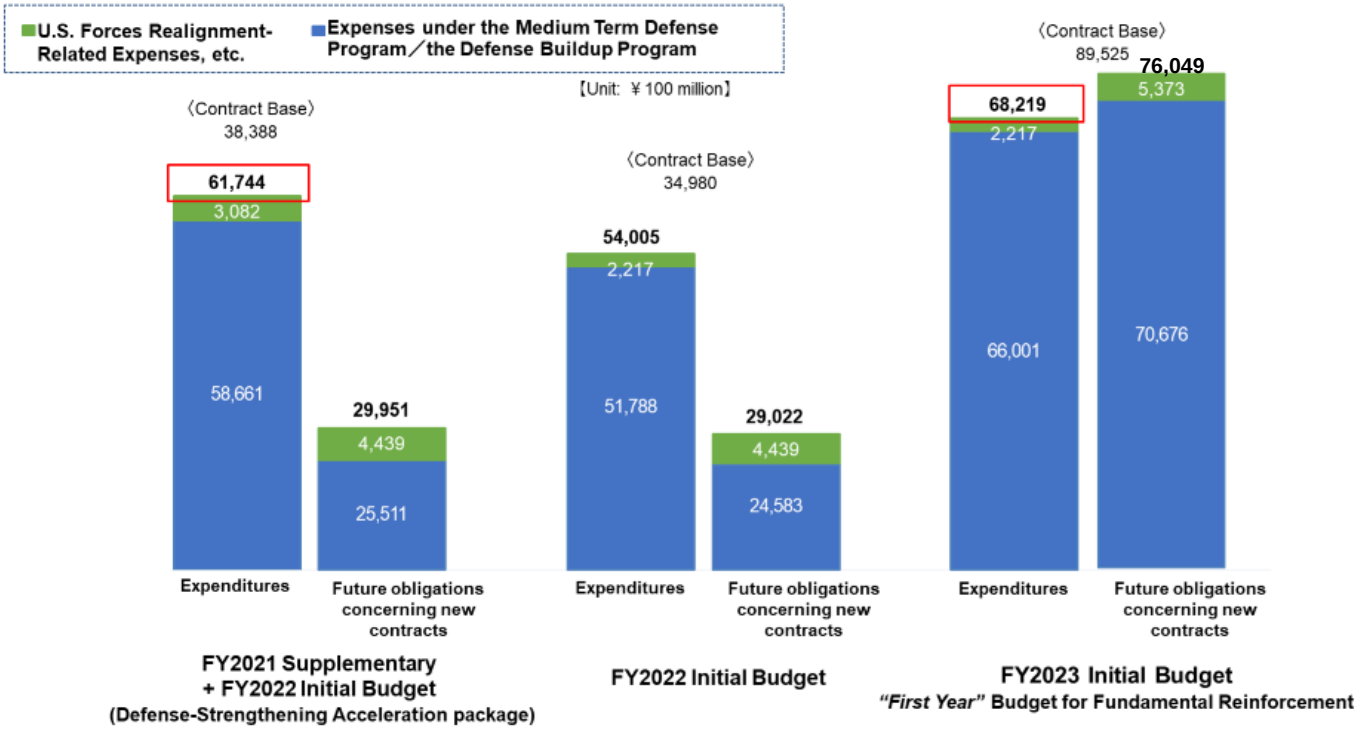
○ Notably, **investment in improving operational availability, securing ammunition, and reinforcing key defense facilities** (undergrounding of important headquarters, barracks, etc.) will be accelerated to maximize the use of existing equipment.

○ The budget for the **living and working environment of SDF personnel** (fixtures, daily utensils, clothes, barracks, etc.) is secured at the required amount. In particular, the budget to improve air-conditioning, which has a direct impact on the health of SDF personnel and is highly demanded by SDF units, is maximized.

Defense-Related Expenditures for FY2023
("*First Year*" Budget for Fundamental Reinforcement of Defense Capabilities)

○ In FY2022, under the concept of "Defense-Strengthening Acceleration Package," the initial budget for FY2022 was compiled together with the supplementary budget for FY2021 to secure approximately ¥6 trillion

In contrast, **for FY2023, a "substantial increase of defense budget" was achieved only in the initial budget**



* "Defense-Related Expenditures" are the sum of the expenditures under the Ministry of Defense and the expenditures under the Digital Agency related to the system of the Ministry of Defense

FY2023 Budget Allocation Policy

○ Based on the new Defense Buildup Program, defense development projects are classified into 15 categories. The FY2023 annual budget was allocated according to this new classification

Classification	Areas	Five-year Total Costs (contract base)	FY2023 Costs (contract base)	FY2023 Costs (Expenditure base)
Stand-off Defense Capabilities		Approx. ¥5 trillion	Approx. ¥1.4 trillion	Approx. ¥0.1 trillion
Integrated Air and Missile Defense Capabilities		Approx. ¥3 trillion	Approx. ¥1 trillion	Approx. ¥0.2 trillion
Unmanned Defense Capabilities		Approx. ¥1 trillion	Approx. ¥0.2 trillion	Approx. ¥0.02 trillion
Cross-Domain Operation Capabilities	Space	Approx. ¥1 trillion	Approx. ¥0.2 trillion	Approx. ¥0.1 trillion
	Cyber	Approx. ¥1 trillion	Approx. ¥0.2 trillion	Approx. ¥0.1 trillion
	Vehicles/Vessels/Aircraft, etc.	Approx. ¥6 trillion	Approx. ¥1.2 trillion	Approx. ¥1.1 trillion
Command and Control/Intelligence-related Functions		Approx. ¥1 trillion	Approx. ¥0.3 trillion	Approx. ¥0.2 trillion
Mobile Deployment Capabilities/Civil Protection		Approx. ¥2 trillion	Approx. ¥0.2 trillion	Approx. ¥0.1 trillion
Sustainability and Resiliency	Ammunitions	Approx. ¥2 trillion (Approx. ¥5trillion including other areas)	Approx. ¥0.2 trillion (Approx. ¥0.8trillion including other areas)	Approx. ¥0.1 trillion (Approx. ¥0.3trillion including other areas)
	Improvement of Operational Availability of Defense Equipment	Approx. ¥9 trillion (Approx. ¥10 trillion including other areas)	Approx. ¥1.8 trillion (Approx. ¥2trillion including other areas)	Approx. ¥0.8 trillion (Approx. ¥1.3trillion including other areas)
	Facilities Improvement	Approx. ¥4 trillion	Approx. ¥0.5 trillion	Approx. ¥0.2 trillion
Reinforcing Defense Production Base		Approx. ¥0.4 trillion (Approx. ¥1 trillion including other areas)	Approx. ¥0.1 trillion (Approx. ¥0.1trillion including other areas)	Approx. ¥0.1 trillion (Approx. ¥0.1trillion including other areas)
Research and Development		Approx. ¥1 trillion (Approx. ¥3.5 trillion including other areas)	Approx. ¥0.2 trillion (Approx. ¥0.9trillion including other areas)	Approx. ¥0.1 trillion (Approx. ¥0.2trillion including other areas)
Base Measures		Approx. ¥2.6 trillion	Approx. ¥0.5 trillion	Approx. ¥0.5 trillion
Training/Education, Fuels		Approx. ¥4 trillion	Approx. ¥0.9 trillion	Approx. ¥0.7 trillion
Total		Approx. ¥43.5 trillion	Approx. ¥9 trillion	Approx. ¥4.4 trillion

(Reference 1) Review of Annual Plans/Budget Allocation Policy

○ In the past, the defense budget was allocated based on only two categories: "frontal" and "logistics". For FY2023, the budget is allocated based on newly shown 15 categories to accumulate the budget quotas more precisely

○ Owing to this new categories, the budget for ammunitions, maintenance, facilities, living and working environment, etc. are properly secured

<Past Categories>

ex-frontal

ex-logistics

<New Categories>

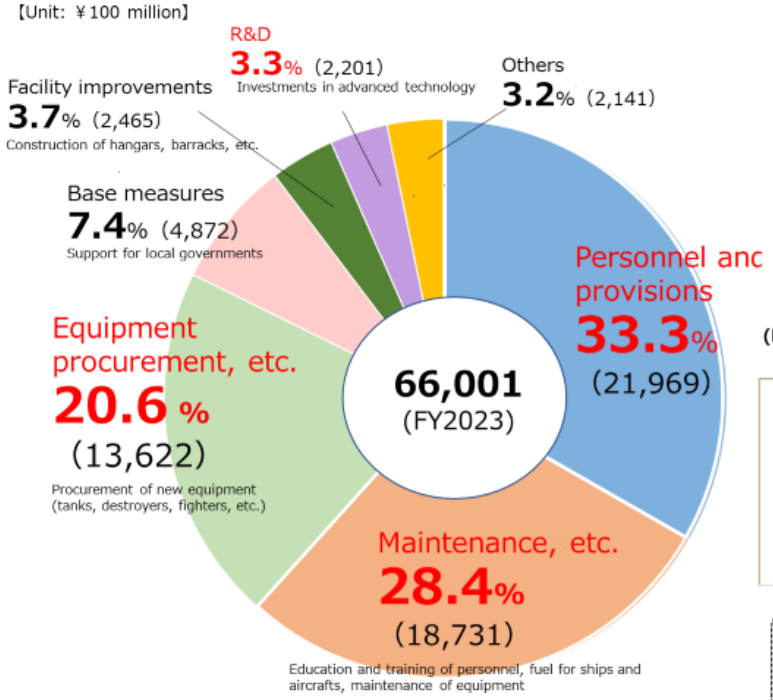
- Stand-off Defense Capabilities
- Integrated Air and Missile Defense Capabilities
- Unmanned Defense Capabilities
- Cross-Domain Operation Capabilities (Space)
- Cross-Domain Operation Capabilities (Cyber)
- Cross-Domain Operation Capabilities (vehicle/vessels/aircraft, etc.)
- Command and Control/ Intelligence-related Functions
- Mobile deployment capabilities/Civil protection
- Securing ammunition and guided ammunition
- Maintenance Expenses ford Defense Equipment, etc. and Securing Mobility
- Fortifying Defense Facilities
- Reinforcing Defense Production Base
- Research and Development
- Base Measures
- Training/Education, Fuels

Categories by use of the FY2023 Budget

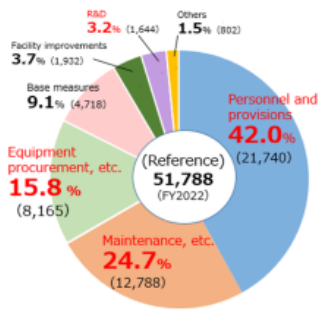
○In the FY2023 budget, the budget for equipment acquisition and R&D accounts for more than 20% of the defense budget, while the ratio of maintenance fee for existing equipment also increased

*NATO member countries aim to allocate at least 20% of their defense budgets to equipment acquisition and R&D by 2024

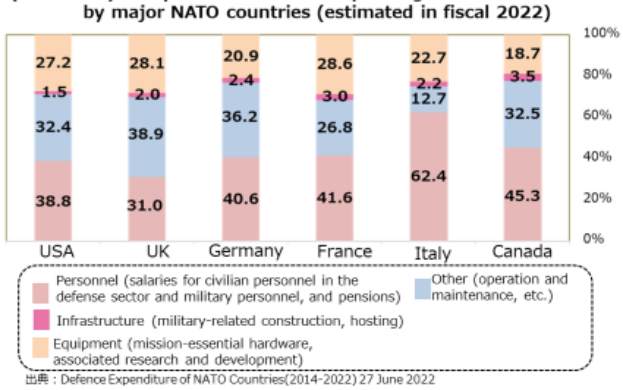
【Unit: ¥100 million】



Note: Excludes U.S. Forces realignment-related expenses, etc.



(Reference) Composition of defense spending by major NATO countries (estimated in fiscal 2022)

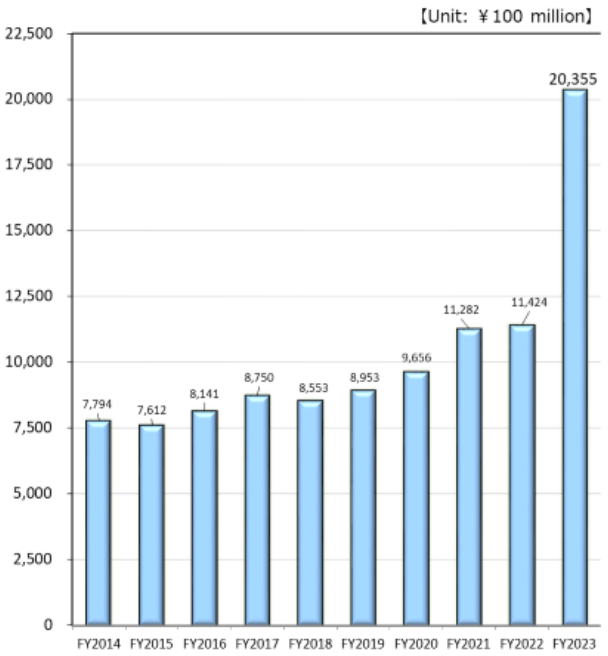


出典：Defence Expenditure of NATO Countries(2014-2022)27 June 2022

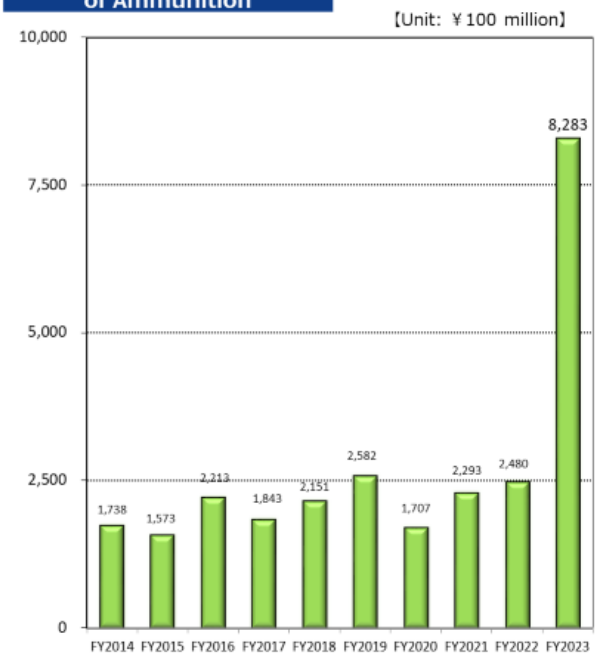
Improving the Number of Operationally Available Assets and Securing Ammunitions

○ In order to eliminate material shortages and improve the number of operationally available equipment, **¥2,035.5 billion, 1.8 times the amount of FY2022**, was allocated to **sustainment and maintenance of equipment**. On top of that, in order to secure amount of ammunition necessary for continuous operations, **¥828.3 billion, 3.3 times the amount of FY2022**, was allocated to **acquisition of ammunitions**. Through these measures, MOD/SDF will **fundamentally reinforce sustainability and resiliency**

Expenses for Sustainment and Maintenance of Equipment



Expenses for Procurement of Ammunition

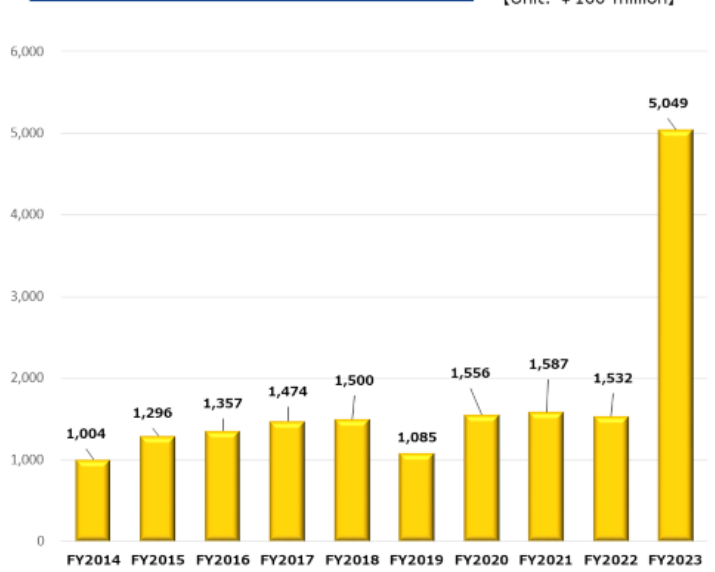


Strengthening SDF Infrastructure

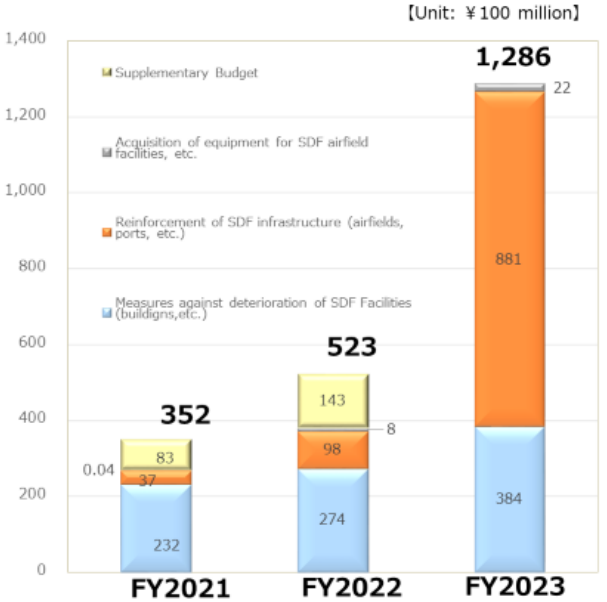
○ In order to **accelerate the upgrading of the SDF facilities**, **¥504.9 billion, 3.3 times the amount of FY2022**, was allocated to **facility maintenance**

○ Remarkably, based on the "Five-Year Acceleration Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience", **(1) strengthening the SDF infrastructure (airfields, ports, etc.)**, and **(2) implementing measures to improve SDF facilities' (buildings, etc.) resistance**, are the areas of focus

Expenditures for Procurement of SDF facilities (excluding housing)



Expenditures Related to National Resilience (Five-Year Acceleration Plan)

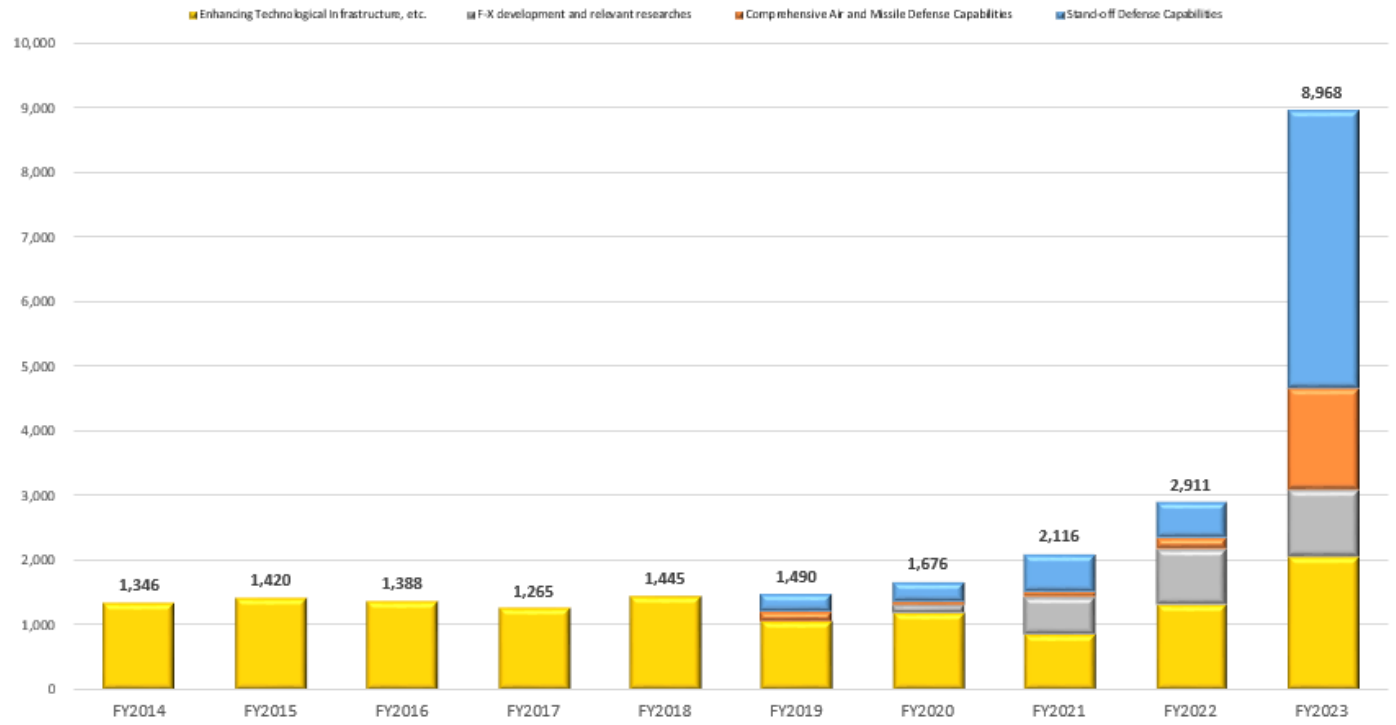


Research & Development

○ MOD will **invest intensively** in areas of **defense equipment technology** directly related to future warfighting, such as **stand-off defense capabilities, counter-HGV (Hypersonic Gliding Vehicle) capabilities, anti-swarm-attack capabilities**, with making steady progress in the development of the next-generation fighter aircraft

In order to reinforce the defense technology basis, **¥896.8 billion, 3.1 times the amount of FY2022**, was allocated to **R&D**

【Unit: ¥100 million】

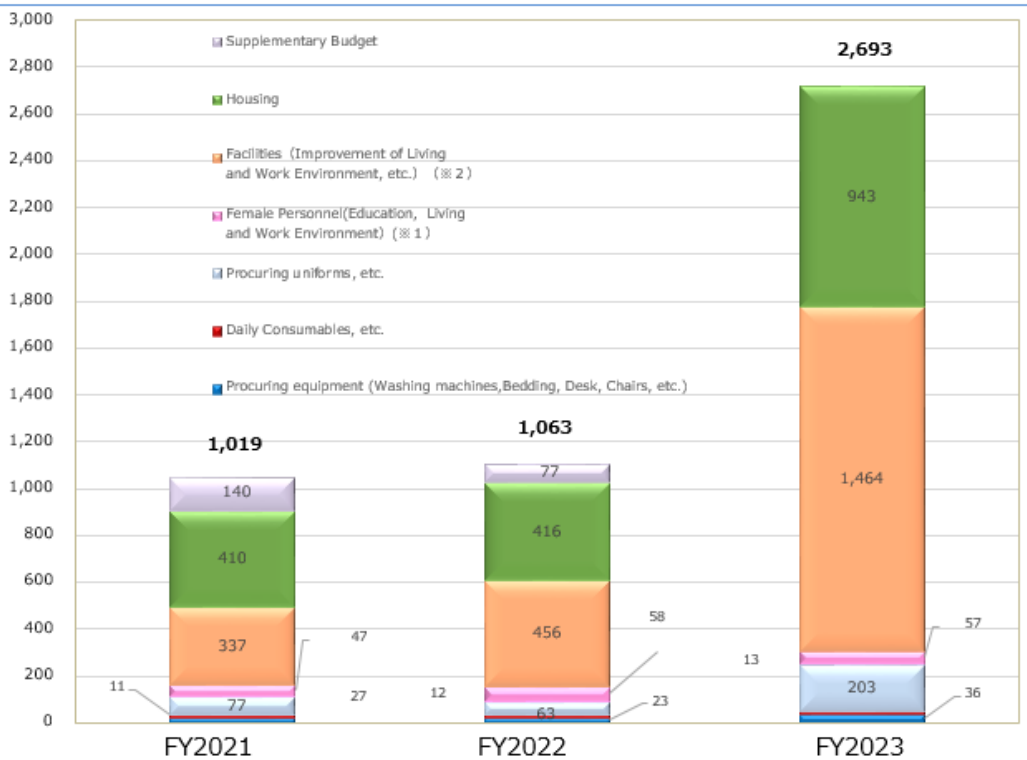


Improving the Living and Working Environment of SDF Personnel

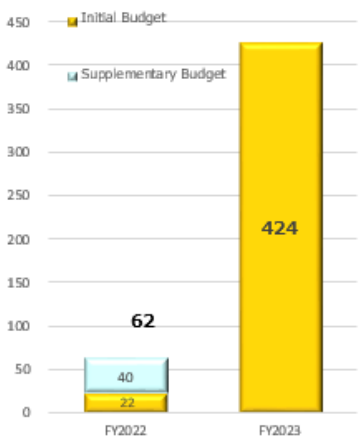
○ In order to improve the **living and working environment of SDF personnel** (fixtures, daily utensils, clothes, barracks, etc.), **¥269.3 billion, 2.5 times the amount of FY2022**, was allocated to this area

○ In particular, the budget to improve **air-conditioning**, which has a direct impact on the health of SDF personnel and is highly demanded by SDF units, was maximized

【Unit: ¥100 million】



Expenditures Related to Air-Conditioning (Facility Maintenance)



(*)The expenditures for establishing new facilities for promoting further participation of female personnel, such as the expansion of the

Defense-Related Expenditures for FY2023
(Expense Classifications/Future Obligations Concerning New Contracts)

【Annual Defense-related Expenditures (3 categories)】 (unit : ¥100 million)

Category	FY2022 Budget	year on year change	FY2023 Budget	year on year change
Defense-Related Expenditures	51,788 (54,005)	553[1.1] (583[1.1])	66,001 (68,219)	14,213[27.4] (14,214[26.3])
Personnel and provisions expenses	21,740	△179[△0.8]	21,969	229[1.1]
Material expenses	30,048 (32,265)	732[2.5] (761[2.4])	44,032 (46,250)	13,984[46.5] (13,985[43.3])
Obligatory outlay expenses	19,651 (20,573)	274[1.4] (194[1.0])	25,182 (26,531)	5,531[28.1] (5,958[29.0])
General material expenses (activity expenses)	10,397 (11,692)	458[4.6] (567[5.1])	18,850 (19,719)	8,453[81.3] (8,027[68.6])

【Future Obligations Concerning New Contracts】 (unit : ¥100 million)

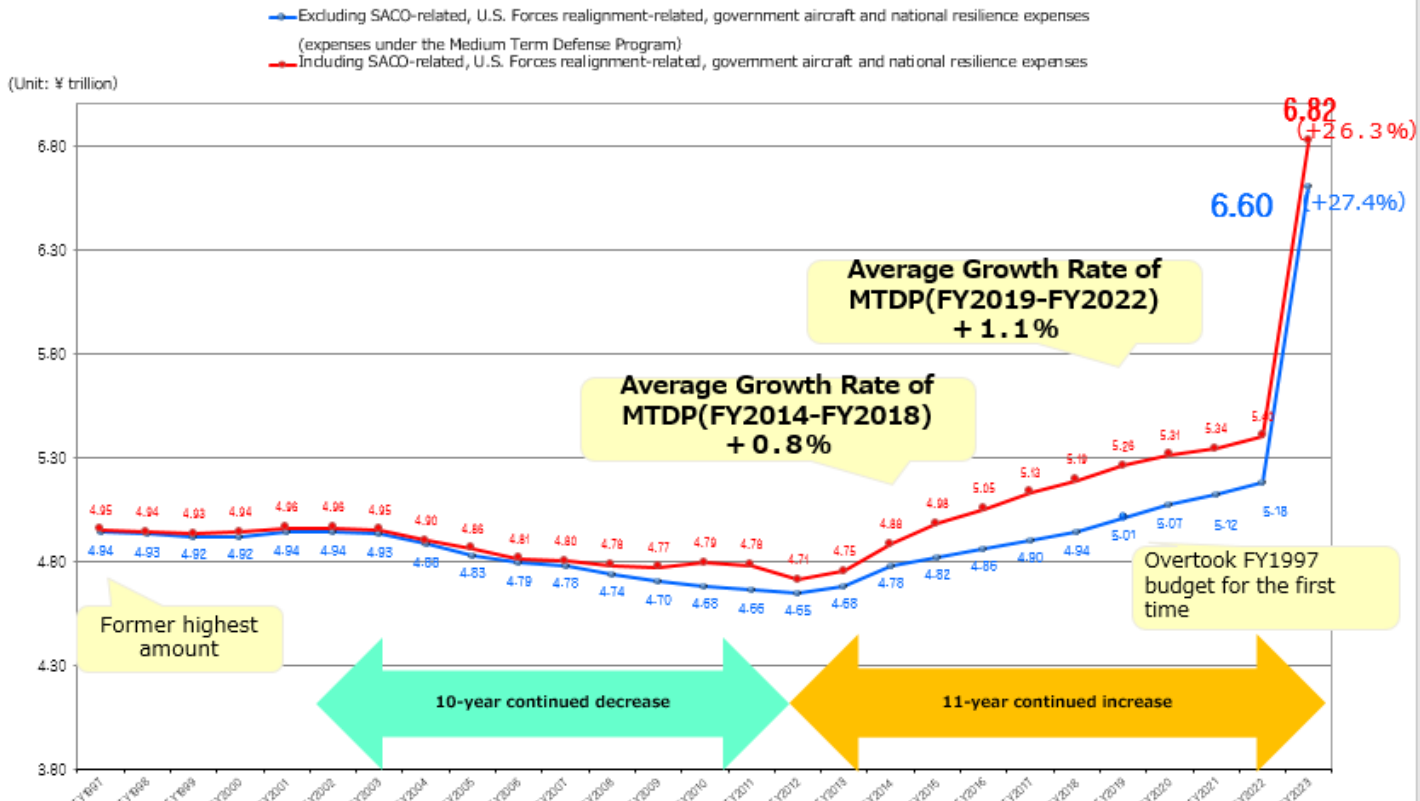
Category	FY2022 Budget	year on year change	FY2023 Budget	year on year change
Future obligations concerning new contracts	24,583 (29,022)	493[2.0] (3,071[11.8])	70,676 (76,049)	46,093[187.5] (47,027[162.0])

【Future obligations concerning new contracts (the sum of new & default)】 (unit : ¥100 million)

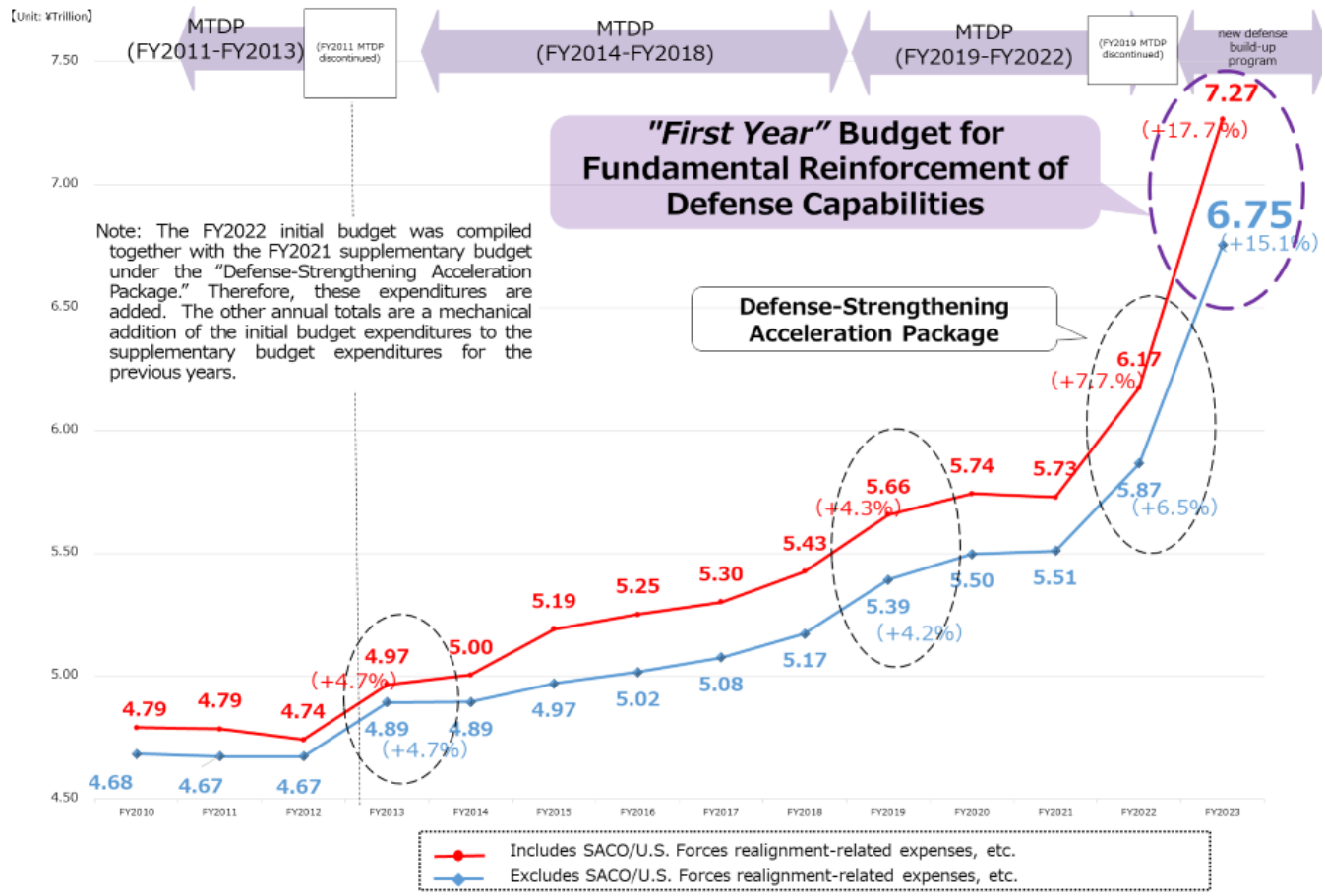
Category	FY2022 Budget	year on year change	FY2023 Budget	year on year change
Future obligations concerning new contracts (the sum of new & default)	53,342 (58,642)	558[1.1] (3,313 [6.0])	99,186 (107,174)	45,844[85.9] (48,532[82.8])

(Note) 1. [ ]:year on year growth rate (%)
2. Totals are rounded off and may not match totals (the same shall apply hereinafter).
3. Figures in the lower row of "Defense-Related Expenditures" include SACO-related expenses , U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities) and other expenses.
4. "Defense-related expenses" are the sum of the expenses managed by the Ministry of Defense and the expenses managed by the Digital Agency for the system of the Ministry of Defense.

(Reference 2) Change in Expenditure (Annual Budget)



(Reference 3) Transition of Expenditures (Package; "15-month budget")



(Reference)

Japan-U.S. Joint Leaders' Statement (May 23rd, 2022) (excerpt)

The two leaders renewed their commitment to strengthening the deterrence and response capabilities of the Alliance. Prime Minister Kishida expressed his resolve to examine all options necessary for national defense, including capabilities to counter missile threats. Prime Minister Kishida stated his determination to fundamentally reinforce Japan's defense capabilities and secure a substantial increase of its defense budget needed to effect it. President Biden strongly supported Prime Minister Kishida's determination.

Basic Policy on FY2023 Budget Formulation (approved by the Cabinet on December 2, 2022) (excerpt)

1. Guiding Thoughts

⑤ As the international situation and security environment is drastically changing, as seen for example in Russia's invasion of Ukraine, Japan will pursue a mobile and robust "realism diplomacy for a new era" and fundamentally reinforce its defense capabilities within five years, with a view on hosting the G7 Hiroshima Summit and the Commemorative Summit for the 50th Year of ASEAN-Japan Friendship and Cooperation next year and serving as a non-permanent member of the UN Security Council. With regard to the fundamentally reinforcing defense capabilities, Japan will integrally and robustly proceed with considering the content of defense capabilities that will be required, understanding the scale of the budget for that purpose, and securing financial resources, and will systematically develop defense capabilities based on the new National Security Strategy and other documents to be revised at the end of the year.

2. Budget Formulation

① In formulating the FY2023 budget, Japan will integrally consider it with the FY2022 Second Supplementary Budget...and will allocate necessary budget in important policy tasks such as responding to diplomatic/security environment changes, and securing the safety and security of Japanese nationals through disaster risk reduction and national resilience...based on the guiding thoughts above and the "Basic Policy on Economic and Fiscal Management and Reform 2022."

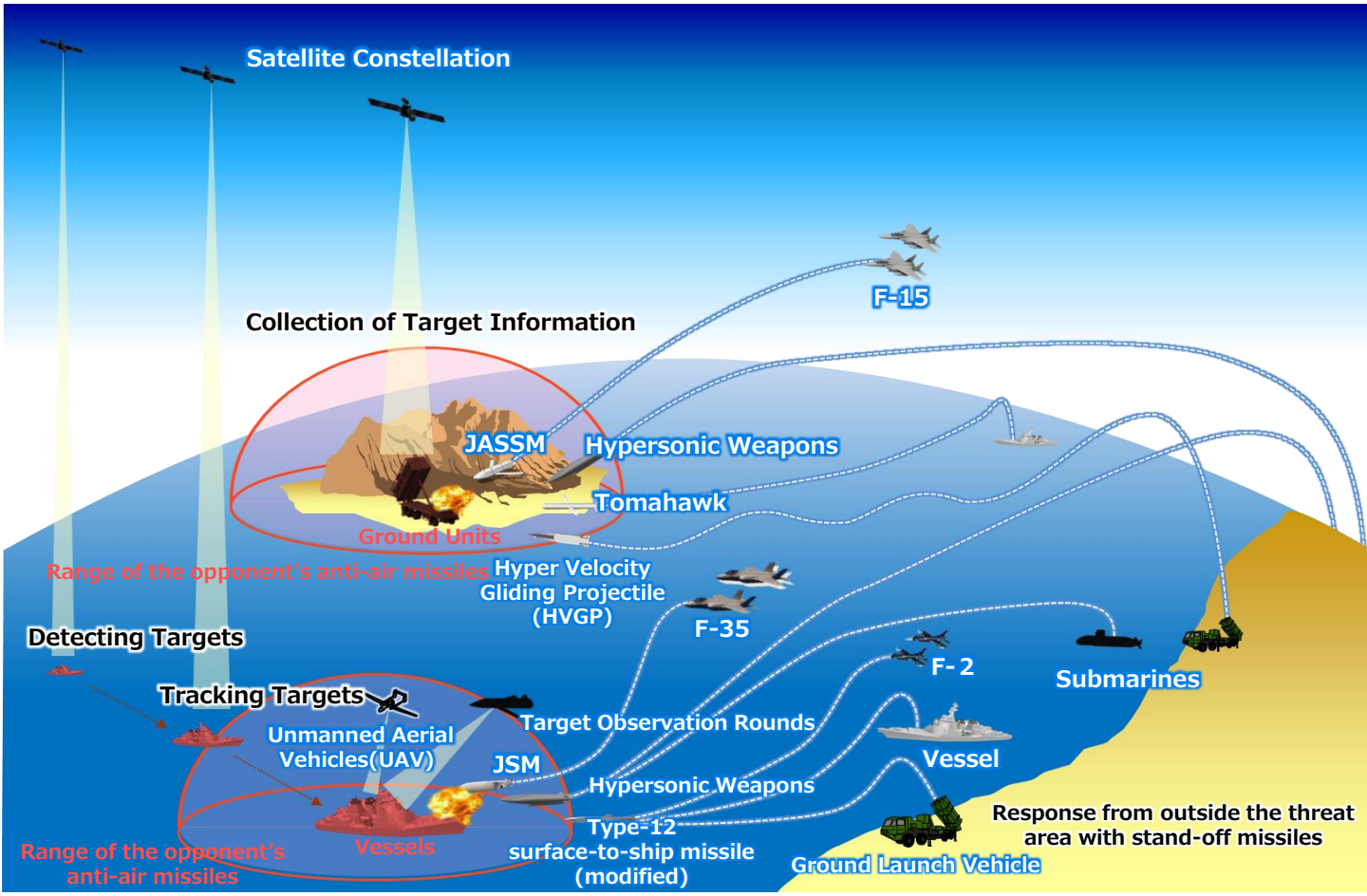
Note 1 : Blue text indicates new programs.
Note 2: Numbers are on a contract base.

Ⅱ Main Programs

1 Stand-off Defense Capabilities
Approximately ￥1,420.7 billion
(Approximately ￥1,413 billion excluding other areas)

- Enhancing capabilities to intercept attacks from as far away from the opponent's threat envelopes as possible from a viewpoint of ensuring safety of SDF personnel and strengthening deterrence are critical.
- Accelerating acquisition and improving operating capability of stand-off missiles are necessary.

Future Operation of the Stand-off Defense Capabilities (Conceptual Image)



Reinforcement of Stand-off Defense Capabilities

○ Development and production of upgraded Type-12 surface-to-ship missile (surface-, ship-, and air-to-ship missiles)
Continue development of upgraded Type-12 surface-to-ship missile (surface-, ship-, and air-to-ship missile) (￥33.8 billion.)
Begin production of the surface-to-ship missile for early deployment (￥93.9 billion) .


Hyper Velocity Gliding Projectile (HVGP) (conceptual image)

○ Research and production of Hyper Velocity Gliding Projectile (HVGP)
Continue research on HVGP which glides at high speed and hits ground targets (￥15.8 billion).
Begin production for early deployment (￥34.7 billion) .


Upgraded HVGP (conceptual image)

○ Development of upgraded Hyper Velocity Gliding Projectile (HVGP) (¥200.3 billion)
Develop upgraded version with extended range from early deployment type.

○ Research on Hypersonic Weapons (¥58.5 billion)
Steadily promote research and development of hypersonic missiles which fly at hypersonic speeds (above 5 times the speed of sound) and are difficult to be intercepted.


Hypersonic Weapons (conceptual image)

○ Research on new anti-ship missiles (¥34.2 billion)
Develop prototype of modular, multi-mission missiles that feature longer-range, lower radar cross-section (RCS) and higher mobility technologies.

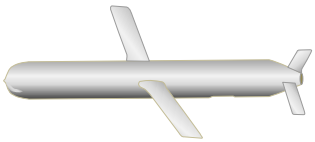

New anti-ship missiles for the defense of remote islands (conceptual image)

○ Procurement of JSM (¥34.7 billion)
Procure stand-off missiles to equipped on the F-35A.
*JSM: Joint Strike Missile

○ Procurement of JASSM (¥12.7 billion)
Procure stand-off missiles to equipped on Upgraded F-15.
*JASSM: Joint Air-to-Surface Stand-Off Missile


JASSM (conceptual image)

○ Procurement of Tomahawk (¥211.3 billion)
Procure US-made ship-to-surface missiles that can be launched from Vertical Launching System (VLS) .


Tomahawk (conceptual image)

Procurement/Upgrade of Launch Platform

○ Procurement and upgrade of Various Launch Platforms
In order to be able to launch and equip various stand-off missiles from a variety of platforms, procure ground equipment for ground-launched missiles and upgrade existing platforms.
Procurement of Ground Equipment for Ground-launched Missiles (¥22.5 billion) (upgraded Type-12 surface-to-ship missile (ground-launched) and Hyper Velocity Gliding Projectile (HVGP))
F-35A Upgrade Program (3 aircraft) (¥4.1 billion) (JSM)
F-15 Upgrade Program (18 aircraft : ¥81.1 billion, initial cost ¥81.6 billion) (JASSM)
F-2 Upgrade Program (9 aircraft) (¥12.8 billion) (upgraded Type-12 surface-to-ship missile (air-launch type))
Procurement of Relevant Equipment to be equipped on Aegis Ship, etc. (¥110.4 billion) (Tomahawk)


JSM (conceptual image)

Strengthening Information Collection and Analysis

○ In order to ensure the effectiveness of stand-off defense capabilities, conduct demonstrative research on reconnaissance UAVs (combat drone) capable of collecting information on invading forces, etc., in the vicinity of targets, and develop target observation rounds which observe targets with rapid advancements. Along with these initiatives, intelligence collection and analysis utilizing space domain will be reinforced. (¥61.9 billion)
Conduct demonstrative research for full-scale operation of combat drone
Develop target observation rounds.
Promotion of acquisition of data for imagery analysis


Combat UAV (conceptual image)

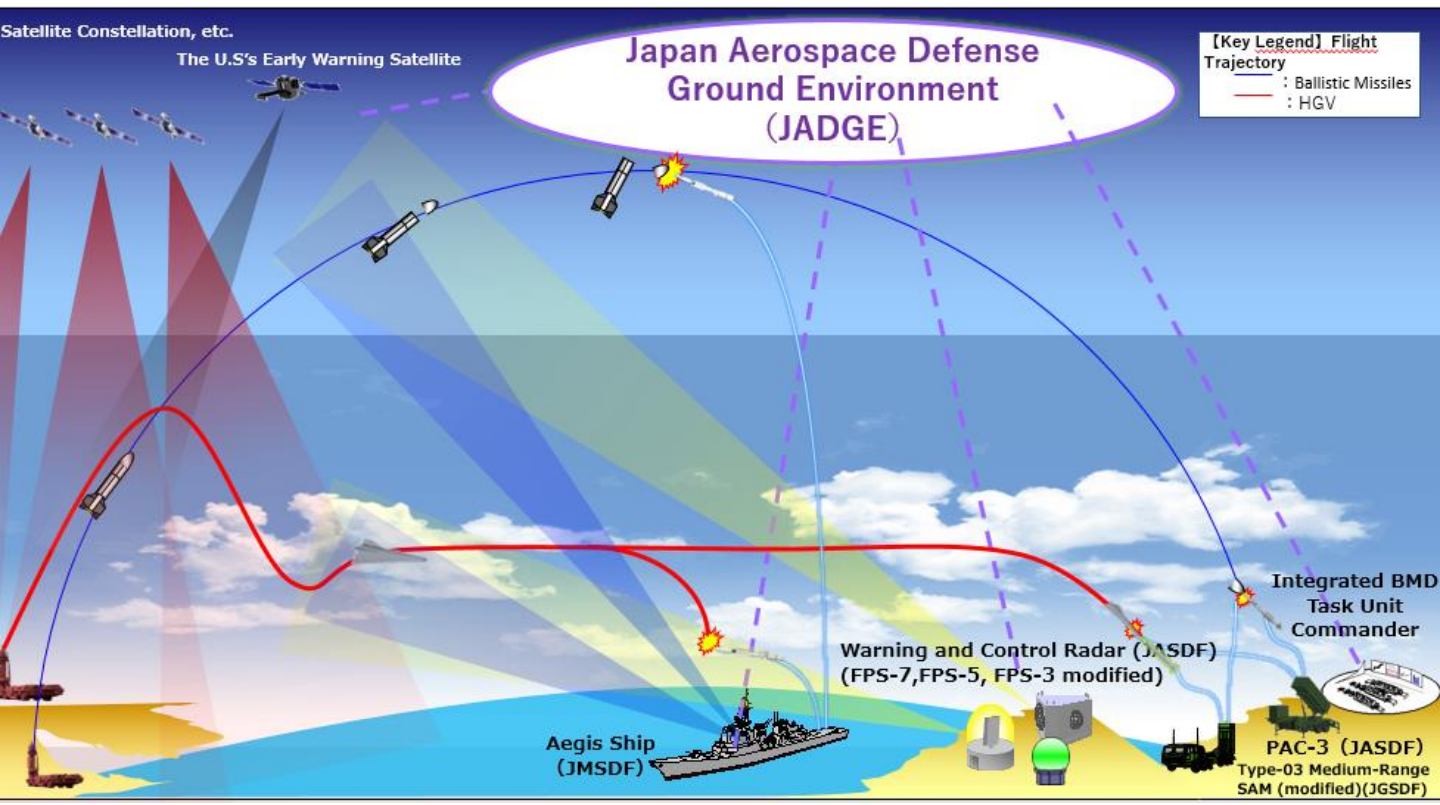
Reinforcement of the defense industry to expand domestic manufacturing capacity

○ Reinforce domestic manufacturing capacity for stand-off missiles (¥129.6 billion) .
Initial cost of production, etc. of modified type-12 surface-to-ship missile
Initial cost of production, etc. of Hyper Velocity Gliding Projectile (HVGP)

2 Integrated Air and Missile Defense Capabilities
Approximately ￥986.7 billion
(Approximately ￥982.9 billion excluding other areas)

- It is critical to effectively respond to increasingly diverse and complex airborne threats such as various missiles and aircraft.
- Improving detect and track capabilities, achieving effective response through networking, and enhancing intercept capabilities are necessary.
- Japan will first intercept missiles flying to Japan over the high seas and Japan's territorial airspace with its missile defense system. Subsequently, as a measure for self-defense to the minimum required level to prevent missile attacks including ballistic missiles, Japan will utilize capabilities including stand-off defense capabilities to conduct effective counterstrike in the opponent's territory (counterstrike capabilities).

Conceptual Image of Integrated Air and Missile Defense Capabilities (HGV, Ballistic Missile Interception Phase)



Gather indication of missile launch with **Satellite Constellation, etc.**

① Detect with **the U.S.'s Early Warning Satellite**

② Detect with **Aegis Ship**

②Detect/Track with **Warning and Control Radar**

③Information gathering to **JADGE** and allocation of interception weapons by **the BMD integrated Commander Task Force**

④Interception by **PAC-3**

④Interception by **Type-03 Medium-Range SAM (modified)**

④Interception by **Aegis Ship**
・SM-3 for Ballistic Missiles
・SM-6 for HGV

Strengthening interception Assets

○ Aegis System Equipped Vessel (ASEV) (¥220.8 billion)
Start procurement of components for introducing ASEV that possess significantly improved BMD capability capable of responding to lofted and simultaneous ballistic missiles, as well as expandability for responding to HGVs and other such threats.

○ Develop upgraded Type-03 medium-range surface-to-air guided missile (modified) .
(¥75.8 billion)
Upgrade to enable responses towards HGVs and ballistic missiles.

○ Enhance capabilities to respond to ballistic missiles, cruise missiles, HGVs
SM-3 Block ⅡA (¥59.5 billion), SM-6 (¥13.6 billion), PAC-3 MSE (¥42.1 billion), Type-03 Medium-Range SAM (modified) (¥24.8 billion) , base air defense surface-to-air missile (SAM) (¥12.9 billion), re-guarantee PAC- 2GEM (¥30.4 billion), etc.

○ Research on HGV Response (¥58.5 billion)
In order to deal with the threat of HGVs flying at hypersonic speeds in high-altitude regions with high mobility, the SDF will establish the necessary elemental technologies at an early stage in order to respond to HGV.


SM-3 Block ⅡA


SM-6


PAC-3MSE


Type-03 Medium-Range SAM (modified)

Strengthening of Sensor Networks

○ Reinforce warning/control capabilities
FPS-5(¥0.3 billion), FPS-7(¥4.3 billion), upgrade JADGE (¥9 billion)

○ Procurement of Early Warning Aircraft (E-2D) (5 aircraft : (¥194.1 billion)
In order to reinforce early warning capabilities in the airspace around Japan, including the vast airspace over the Pacific, procure Early Warning Aircraft.

○ Procurement of Mobile Warning and Control radars (TPS-102A) (¥2.8 billion)
Strengthening the continuous warning and surveillance posture in the southwestern region.


FPS-5


FPS-7


Early Warning Aircraft (E-2D)


Mobile Warning and Control radars (TPS-102A)

Others

○ Procurement of parts necessary for maintenance in order to stably and continuously operate the Patriot system, etc. (¥71.7 billion)

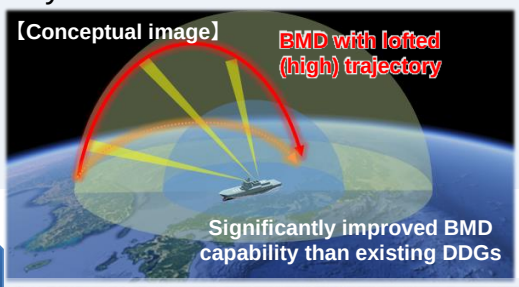
COLUMN

Acquiring New BMD Capability

COLUMN

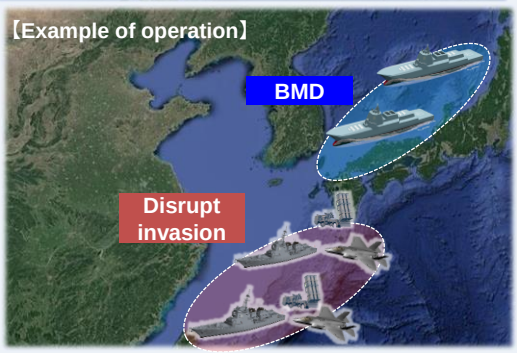
◆ Response towards North Korea's missile capability advances

- North Korea is enhancing and improving its ballistic missile attack capability on a daily basis. Missiles launched from North Korea have entered Japan's EEZ on a number of occasions, causing a grave threat to the surrounding region.
- To respond to these threats that may harm the lives and properties of the Japanese people, MOD/SDF so far have fielded 28 PAC-3 units and 8 Aegis ships (DDGs).
- However, in order to respond to ballistic missiles that are launched as high as several thousand kilometers on a lofted trajectory, or simultaneous and multiple raids, the introduction of 2 Aegis System Equipped Vessels (ASEV) that possess significantly improved BMD capability than existing DDGs is necessary .
- Additionally, MOD/SDF must also acquire capability to respond to Hypersonic Glide Vehicles (HGVs), and building a new BMD response capability has become an urgent task.



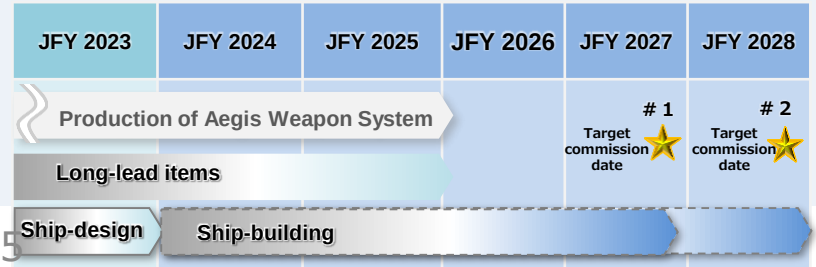
◆ Reinforcing response capabilities in the southwestern region

- Japan's 8 existing DDGs are originally meant to be operated as air defense destroyers for maritime operations. However, they are currently forced to focus solely on BMD missions, which is a situation that needs to be resolved urgently.
- Possessing 2 ASEVs that will primarily conduct BMD missions will free up the 8 DDGs, thereby enhancing BMD and other response capabilities in the southwestern region.



◆ Procurement of ASEV

- ASEV will also be equipped with SM-6 capable of responding to anti-ship ballistic missiles (ASBM) and HGVs at the terminal phase, as well as high protection capabilities by equipping long range missiles such as the Upgraded Type-12 SSMs, while also possessing the same level of various warfare and mobile capabilities as existing DDGs.
- Considering to possess expandability to equip future HGV interceptors, currently under development by the U.S. Missile Defense Agency, while also featuring improved seakeeping ability, habitability, etc.

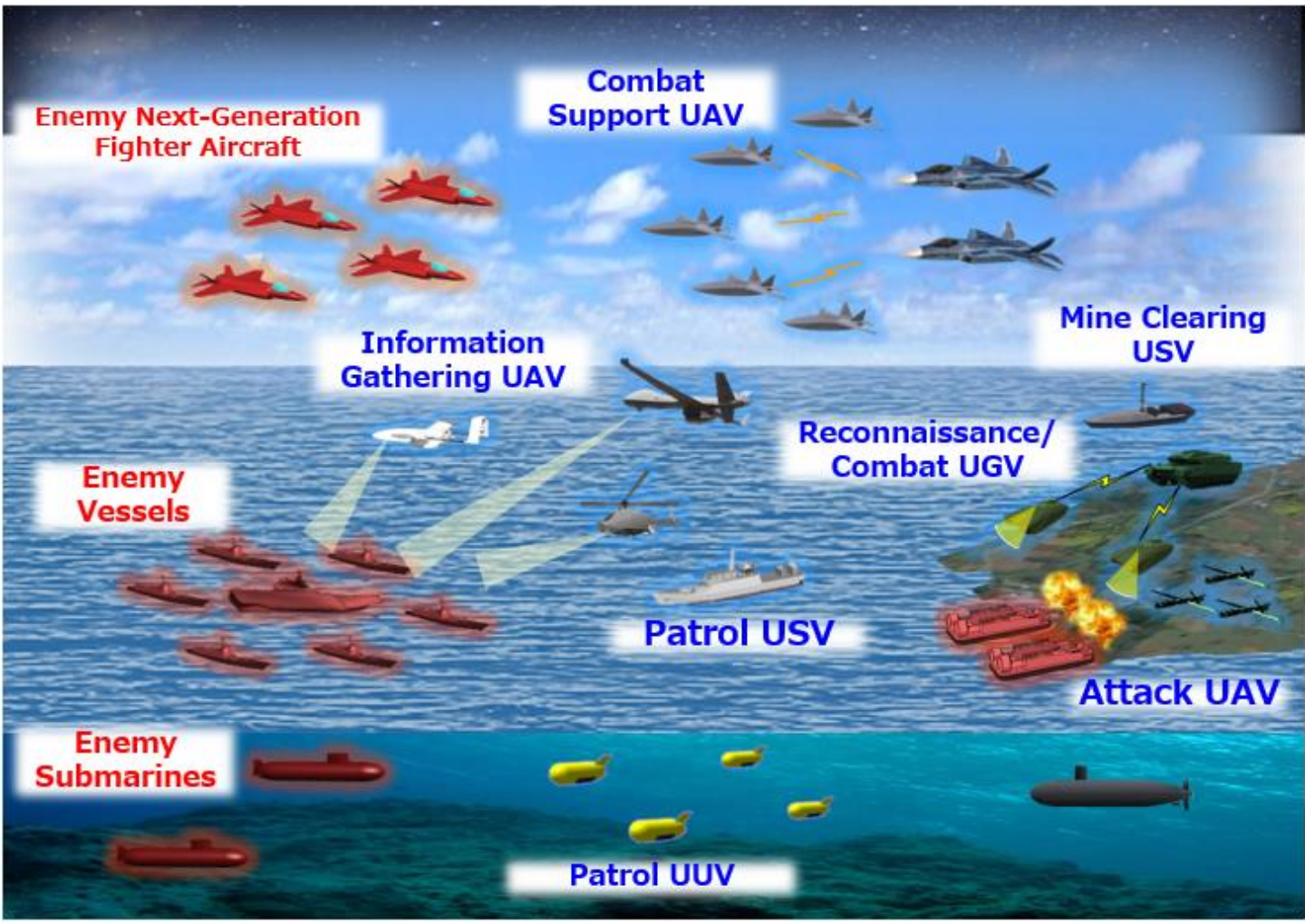


*Equipment layout is not depicted as it will be scrutinized during the designing work process.

3 Unmanned Defense Capabilities
Approximately ￥182.7 billion
(Approximately ￥179.1 billion excluding other areas)

- Unmanned assets are innovative game changers that can gain asymmetrical superiority in the air, on the water, and underwater while minimizing human loss. It is important to overcome various restrictions such as long-term continuous operations and establish seamless ISR posture.
- It is necessary to promptly procure and start operating unmanned assets in the fields of aircraft, naval vessels, and ground vehicles.

Unmanned assets on ground, sea, air, and water（conceptual image）



Strengthening Intelligence, Surveillance, Reconnaissance and Targeting (ISRT) Functions

○ Upgraded Reconnaissance UAV（mid-field）
（6set： ￥8.8 billion）
By equipping a synthetic aperture radar on the existing UAV (mid-field), procure a UAV (mid-field) with enhanced functions that enables clear shooting of targets even at night or when visibility is poor due to bad weather.
*UAV：Unmanned Aerial Vehicle

Reconnaissance UAV (mid-field)

○ Operational Verification of Upgraded Reconnaissance UAVs（mid-field）（￥3.7 billion）
Procure and conduct operational verification on reconnaissance UAVs, which are compatible with satellite communications and enables early detection of information of invading forces over long distances and contributes to commander's decision making and using fire power.

○ Procurement of UAVs (short-range)（5set: ￥600 million）
It is possible to contribute to the commander's assessment of the situation and the demonstration of firepower through information gathering in the air.

UAV (short-range)

○ Operational Verification of Ground Reconnaissance/Warning/Surveillance UGV/UAVs
（￥8.1 billion）
Procure and conduct operational verification on reconnaissance UGV/UAVs that can form a continuous and multi-layered surveillance network for warning/surveillance and responding to suspicious persons at bases, critical facilities, etc.
*UGV：Unmanned Ground Vehicle

○ Research on miniature UGV（￥6 billion）
In addition to collecting information materials on the ground and sharing information, procure UGVs that can provide various types of support following small units, and conduct operational verification.

○ Procurement of maritime observation UUVs（￥1.8 billion）
Introduce a maritime observation UUV that contributes to strengthening the maritime capabilities of MSDF, and implement performance tests, etc. for deployment.

○ Maintenance and Procurement of Long-endurance UAV
（￥19.2 billion）
Regarding unmanned aerial vehicles (Global Hawk), in addition to procuring necessary spare parts, the SDF will receive logistical support from a U.S. company for operation training and maintenance.

Long-endurance UAV (Global Hawk)

Maintenance of Unmanned Assets with Various Attack Functions

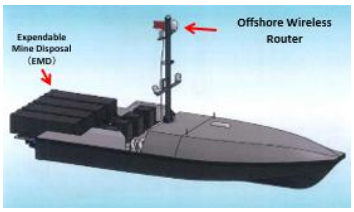
○ Operational Verification on Utility/Attack UAVs（￥6.9 billion）
Procure and conduct operational verification on multipurpose UAVs that effectively possess various functions of information collection, fire power, and electronic warfare, as well as attack UAVs that can immediately use fire power by collecting information on invasion forces, etc.

Utility/Attack UAV
(conceptual image)

○ Operational Verification on Miniature Attack UAVs（￥3 billion）
In response to landing forces invading Japan and protection of critical facilities and others in the islands, procure and conduct operational verification of miniature attack UAVs capable of detecting and identifying invading forces and responding to personnel, vehicles, naval vessels, etc.

Miniature Attack UAV
(conceptual image)

○ Development of Unmanned Mine Clearing Systems
（￥4.5 billion）
In order to attach anti-mine warfare functions to the "Mogami" type Frigates Multipurpose/Mine (FFM), the MOD/SDF acquire USV, one of the unmanned mine clearing systems that can deal with mines without entering dangerous sea areas where mines. are laid *USV: Unmanned Surface Vehicle



USV for Unmanned Mine Clearing Systems
(conceptual image)

○ Development of Mine Search UUV（OZZ-5） （￥9.3 billion）
Develop an underwater mine search drone that is part of an unmanned mine clearing system for "Mogami" type Frigates Multipurpose/Mine (FFM) to conduct anti-mine warfare.

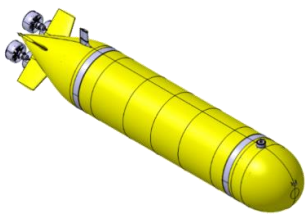
Development of Mine-Searching UUV（OZZ-5）

Research and Development on Unmanned Assets

○ Research on UUV control technology（￥26.2 billion）
Conduct research on technologies to control UUV by the commanding UUV to enhance operational capabilities in the underwater domain.

○ Research on Unmanned Combat UGV（￥6.8 billion）
Conducted research on operation support technology to control multiple unmanned combat vehicles from a manned vehicle, autonomous driving technology, etc.

○ Research on UUV technology for long term operation
（￥900 million）
In anticipation of future complex and various missions, conduct research on long-term operational UUVs that enables to add-functions and performance of UUVs to timely meet operational needs by just adding modules.



Research on long-term operational type UUV technology
(conceptual image)

4 Cross-domain Operation Capabilities

- In addition to the ground, maritime, and air domains, it is necessary to fundamentally reinforce capabilities through combinations of space domain (enhancing information gathering functions through the use of satellites, etc.), cyber domain (enhancing security measures, and education of cyber personnel), and electromagnetic spectrum domain (strengthening electronic warfare capabilities and electromagnetic management capabilities) etc., in order to ensure asymmetrical superiority.

【Reinforcing Capabilities in the Space Domain】
Approximately ￥184.4 billion（Approximately ￥152.9 billion excluding other areas）

- The space domain is now the foundation of our citizen's daily lives and security, and it is extremely important for Japan to ensure superiority in space use.
- For this reason, it is necessary to strengthen space operational capabilities including information gathering and other capabilities which utilize the space domain.

Reinforcement of Information Collection Capabilities Utilizing Space Domain

○ Technological demonstration necessary to improve response capabilities such as satellite-based HGV detection and tracking（￥4.6 billion）
Conduct space demonstrations on the infrared sensors required to detect and track HGVs from space.

○ Demonstration of Common Key Technologies Necessary for Utilization of the Space Domain （￥8 billion）
Implement advanced demonstrations to establish high-speed processing and transmission technology required to respond to HGV and to acquire SAR/optical images in real time.

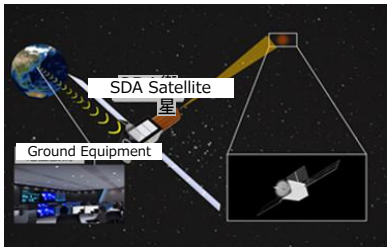
○ Procurement of Data for Image Analysis （￥22.6 billion ）
Collect information in the region surrounding Japan by using various commercial satellites including high resolution optical satellites and small satellite constellations.

○ Enhancement of X-band satellite communications Network, etc.（￥34.3 billion）
In order to enhance equipment and related ground facilities capable of communicating with the defense communications satellite "Kirameki," procure receiving devices equipment and widen the band of ground station communications.

Enhancement of Space Domain Awareness (SDA)

○ Enhancement of Space Domain Awareness (SDA)
（￥59.5 billion）
Produce SDA satellite and further consider operating multiple satellites.

○ Development of space operations command and control system, etc.
（￥13.7 billion）
In order to reinforce the operational base for space operations, develop space operation command and control system, etc.



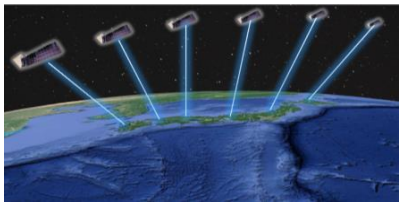
SDA satellite (conceptual image)

Strengthening Resiliency of Space Utilization

○ Use of Low Earth Orbit Communication Satellite Constellation Service
（￥0.2 billion）
The SDF (Ground, Maritime and Air) will demonstrate the utility of communication services provided by commercial satellites.

○ Demonstration for PATS（￥1.9 billion）
In order to prepare to join the Protected Anti-jam Tactical SATCOM (PATS), a framework for sharing satellite communications bands among member states, including the United States, procure communications equipment.

○ Demonstration of technology with high resiliency for satellite communications
（￥1.6 billion）
Demonstrate technology with high resiliency against interference from enemies, assuming that the technology will be equipped on the next-generation defense communications satellite.


Satellite Constellation
(conceptual image)

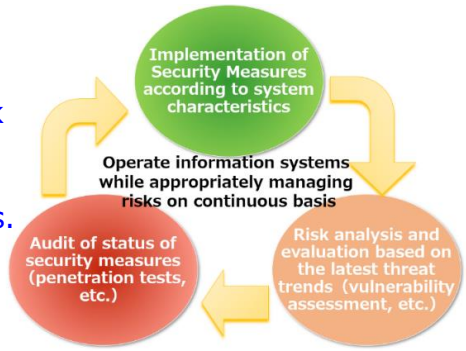
Reinforcement of Organization System

○ Reorganization of the Space Operations Group
By increasing the number of personnel, strengthen the system of stably operating equipment for Space Domain Awareness (SDA) as well as command and control functions.

【Reinforcing Capabilities in the Cyber Domain】
Approximately ￥264.3 billion (Approximately ￥236.3 billion excluding other areas)

➢ In order to respond to the latest cyber threats, the MOD/SDF will make the following efforts : ①ensuring cybersecurity by continuously implementing risk management of MOD/SDF information systems; ②strengthening protection of MOD/SDF information systems including defense equipment and facility infrastructure at the SDF bases ; and ③strengthening cyber defense posture, cyber workforce development, and technological development for implementing the above initiatives.

Introduction of Risk Management Framework (RMF) (￥33.9 billion)
By shifting its concept from transient "risk elimination" to continuous "risk management", the MOD will introduce the "Risk Management Framework (RMF)" in which risks are analyzed, assessed, and appropriately managed on a continuous basis even after the commencement of information system operations.



Risk Management Framework (conceptual image)

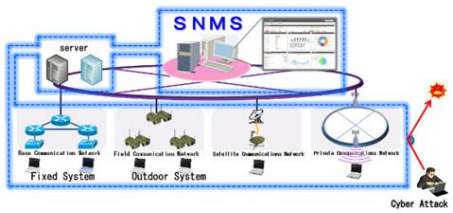
Protection of Information Systems
Strengthen the protective posture for the information systems, including equipment and facility infrastructure.

○ Development of cloud
Develop a cloud system to integrate and standardize SDF systems that serve as the foundation of mission execution, and implement centralized cybersecurity measures.
Development of Central Cloud （￥43.4 billion）
Development of ASDF cloud（￥75.6 billion）etc.

○ Development of threat hunting equipment（￥2.8 billion）
Development of threat hunting equipment for continuous search and detection of potential internal threats

○ Development of Cyber Protection Analyzers（￥2.8 billion）
Strengthen the capabilities such as monitoring and assessment of cyber incident response devices which collect and analyze the techniques used in the cyber attacks against MOD.

○ Development of Systems and Network Management Systems (SNMS)（￥8 billion）
Develop a system to centrally protect, monitor, and control all Ground Self Defense Force systems.



Systems and Network Management Systems (conceptual image)

○ Cybersecurity Measures for Facility Infrastructure（￥4.4 billion）
Conduct physical countermeasures and introduce systems in facility infrastructures to detect, report and block unauthorized connections to mobile storage media and programs.

Enhancement of Education and Research Functions in the Cyber Domain
In order to strengthen cybersecurity posture, strengthen functions which develop cyber workforce and promote research and development pertaining to cybersecurity.

○ Cyber Education utilizing External Resources
(￥1.2 billion)
Provide digital literacy education to all personnel, and offer higher education opportunities in and out of Japan to skilled personnel.

○ Expansion of Cyber Education （￥200 million）
In order to strengthen the cybersecurity posture, reorganize the GSDF Signal School into “the GSDF System and Signal/Cyber School (tentative name)”.


Cyber Education (conceptual image)

○ Strengthening Cooperation with International Partners in the Cyber domain（￥300 million）
As cyber attacks are common challenge to the international community, strengthen cooperation with international partners in the cyber domain through dialogues and trainings.

○ Organizing a Cyber Competitions（￥50 million）
In order to reinforce its cyber capabilities, GSDF organizes a cyber competition which the cyber units of each SDF and international partners participate in.

○ Recruitment of Chief Cybersecurity Advisor（￥50 million）
Recruit highly skilled cyber personnel as part-time national government official to strengthen cyber capabilities.

○ Research on Cyber Protection Technology for Equipment Systems（￥400 million）.

○ Establishment of “Cyber Studies Department (tentative name)“at the National Institute for Defense Studies

Fundamental Reinforcement of the Cyber Defense Posture

Review the cyber defense functions which MOD/SDF should prepare and expand necessary cyber workforce.

○ Enhancement of Posture of the Cyber units
Enhance cyber defense capabilities by reinforcing the cyber defense posture of the SDF Cyber Defense Command, and other cyber related units of the SDF(Ground, Maritime, and Air).

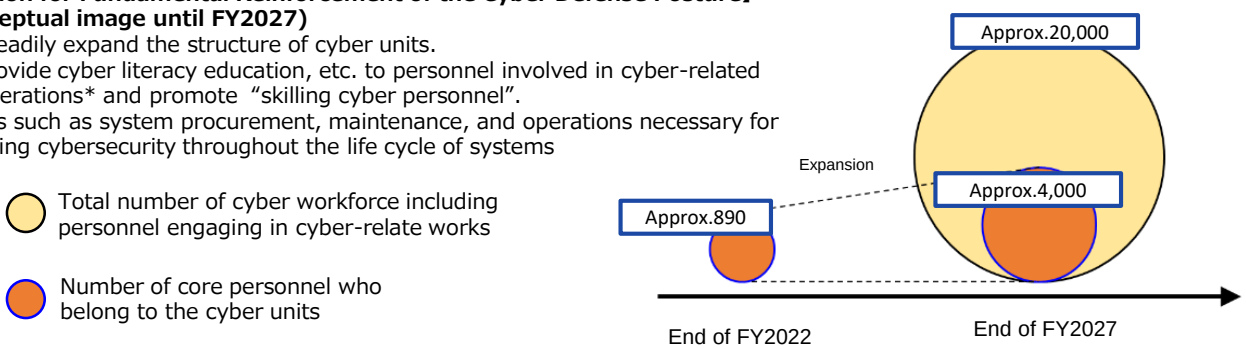
○ Strengthening Functions of Cyber Policy Planning
Establish the “Cyber Policy Planning Division (tentative name)” and “Minister’s Secretariat Councilor” who will be in charge of information assurance and cyber incident response.

○ Promotion of “Skilling Cyber Personnel”
Further promote cyber workforce development by providing education to personnel engaging in cyber-related tasks such as system procurement, maintenance and operations.

【Direction for Fundamental Reinforcement of the Cyber Defense Posture】 (conceptual image until FY2027)

- Steadily expand the structure of cyber units.
- Provide cyber literacy education, etc. to personnel involved in cyber-related operations* and promote “skilling cyber personnel”.

*tasks such as system procurement, maintenance, and operations necessary for securing cybersecurity throughout the life cycle of systems



*Number of Core Personnel in the end of FY2023 : Approx. 2230

Cybersecurity Measures for Defense Industry【Written in p.35&p.36】

○ Project of Developing Systems to Strengthen the Production Base for Defense Equipment, etc. (Including Strengthening Cybersecurity) for the Application of “Standards on Cybersecurity Measures for Defense Industry”

○ Efforts in the Application of “Standards on Cybersecurity Measures for Defense Industry”

○ Development of Defense Security Gateways

【Reinforcing Capabilities in the Domain of Electromagnetic Spectrum】

- With the use of electromagnetic spectrum expanding in range and purpose due to the development of technology and with other countries proceeding the enhancement of electronic warfare capabilities, securing superiority in the domain of electromagnetic spectrum is an urgent issue.
- In the light of this, it is necessary to strengthen capabilities in the domain of electromagnetic spectrum to maximize the capabilities of the SDF.

Reinforcement of SDF's Communication and Radar Jamming Capabilities

○ Organization of electronic warfare unit

Strengthen the GSDF electronic warfare unit to collect and analyze signal information on a regular basis and neutralize use of signals of adversaries in emergencies situation.

○ Upgrade of Network Electronic Warfare System (NEWS) (￥1.4 billion)
Procure upgraded components in order to strengthen NEWS jamming capabilities.

Network Electronic Warfare System

○ Development of A Stand-off Electronic Warfare Aircraft (￥8.3 billion)
Develop a stand-off electronic warfare aircraft that supports the execution of SDF air operations by effectively jamming signals.

Stand-off Electronic Warfare Aircraft (conceptual image)

Reinforcement of Electronic Warfare Capabilities

○ Procurement of F-35A (8 aircraft : ￥106.9 billion)

Procure the F-35A with excellent electronic warfare capabilities
*Final Assembly and Check Out (FACO) is conducted by domestic companies.

○ Procurement of F-35B (8 aircraft : ￥143.5 billion)
Procure the F-35B, with excellent electronic warfare capabilities and which can perform short take off and vertical landing.

○ F-15 Upgrade Program
(18 aircraft : ￥81.1 billion, initial cost : ￥81.6 billion)
Upgrade the electronic warfare capabilities and modify capabilities such as an increase in the number of loaded ammunitions.

F-35A

Reinforcement of Electronic Warfare Support Capabilities

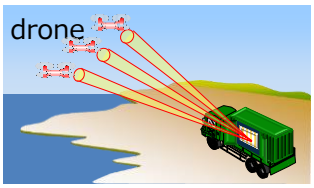
○ Procurement of equipment installed in Signals Intelligence Aircraft (RC-2), etc. (￥13 billion)
Procure equipment for upgraded signal intelligence aircraft, such as expansion of the signal reception bandwidth and enhance long-distance target collection capabilities.

Signals Intelligence Aircraft (RC-2)

Response to Small UAVs

○ Procurement of HPM (high-power microwave) radiation device, etc. (￥2.6 billion)
Conduct research on technologies which disable drones, etc. by radiating HPM, and procure HPM radiation device.

○ Procurement of vehicle-mounted high-energy laser devices to respond to small drones (UAV), etc. (￥11 billion)
Conduct research on technologies to intercept airborne threats, including drones, using high-power lasers, and procure a vehicle-mounted high-energy laser devices.



HPM radiation device (conceptual image)

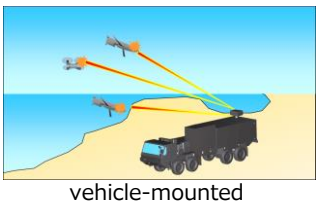
Enhancement of Deception Functions using Electromagnetic Waves

○ Procurement of reflector decoy ammunition (￥800 million)

As test equipment, procure a reflector-type decoy ammunition for vessels that is expected to be effective in deceiving the latest missile seeker, etc.

Enhancement of Electromagnetic Management Functions

○ Development of Electromagnetic Management Functions (￥1.7 billion)
Improve functions of each SDF system for grasping and managing the status of electromagnetic spectrum use.



vehicle-mounted high-energy laser devices (conceptual image)

Ⅱ　Main Programs

【Capabilities in the Ground, Maritime, and Air Domains】

Approximately ￥1,176,3 billion（Approximately ￥1,176,3 billion excluding other areas）

○ Procurement of Future Wheeled Armored Vehicles (personnel carrier type) （26 set：￥13.6billion）
Procure the Future Wheeled Armored Vehicles (personnel carrier type) as the successor to the existing Type-96 Armored Personnel Carrier.

Future Wheeled Armored Vehicles (personnel carrier type) (conceptual image)

○ Procurement of Type-16 Mobile Combat Vehicles (24 cars: ￥21.3 billion)
Procure Type-16 Mobile Combat Vehicles which have outstanding air transportability and on-road mobility.

Type-16 Mobile Combat Vehicles

○ Type-20 5.56 mm rifle (8577 guns：￥3.3 billion)
Procurement of a Type-20 5.56 mm rifle that will be equipped to each SDF personnel as a successor of the Type-89 5.56 mm rifle and will be used for close combat operations by individual SDF personnel.

Type-20 5.56 mm rifle

○ Dozer (with armor) (5 cars：￥2.7 billion)
Procure Dozer (with armor) that contribute to combat of close combat unit by providing facility support such as developing maneuver routes even in situations where there is a high threat of enemy gunfire, etc.

Dozer (with armor) (conceptual image)

○ Decontamination Set (Decontamination Vehicle) (10 cars：￥1.3 billion)
Procure equipment used for the decontamination of areas, facilities and units contaminated mainly by special weapons, which is to be equipped for chemical weapons units, etc.

Decontamination Set (Decontamination Vehicle)

○ Combat Clothing Set （￥14.8 billion）
Procure combat equipment worn by individuals to improve their ability to operate in the field under various circumstances, as well as to hide SDF personnel from enemies' monitoring and observation, and to protect them from fire and shells of enemy attacks.

Combat Clothing Set

Ⅱ Main Programs

○ Procurement of the fixed-wing patrol aircraft (P-1)

(3 aircraft : ￥91.4 billion)

Procure P-1s which enhanced its capability in along with the retirement of the existing P-3C fixed-wing aircraft.
* Capability enhancement relative to the existing P-1 includes; Detection and Identification, Flight performance, Information processing, etc.

P-1

○ Procurement of patrol helicopter (SH-60L (tentative name))

(6 aircraft: ￥60.3 billion)

Procure patrol helicopter (SH-60L (tentative name)) with improved on board systems and flight performance in order to ensure superiority in anti-submarine warfare over foreign submarines with improved stealth capability.

SH-60L (tentative name)

○ Construction of Frigates Multipurpose/Mine (FFM)

(2 ships: ￥116.7 billion)

Construct frigates multipurpose/ mine (FFM) (11th and 12th ships of Mogami-class destroyers (3,900 t class)) which are equipped with compact hulls and improved multirole capability, including mine countermeasures.

Mogami-class
frigate multipurpose/mine

○ Construction of Patrol Vessels (4 vessels: ￥35.7 billion)

Construct patrol vessels (1,900 t class) effectively conduct required surveillance in the seas surrounding Japan.

Patrol Vessels
(conceptual image)

○ Construction of submarine (1 ship: ￥80.8 billion)

Construct a submarine (the seventh new class Taigei-class submarine (3,000 t class)) with enhanced capability (detection, etc.) in order to effectively implement information gathering, warning, and surveillance.

Taigei-class submarine
(conceptual image)

○ Construction and Procurement of Support Vessels

(￥2.2 billion)

Procure 2 tugboats, 2 oil vessels, 1 transport vessel, and 1 special deployment ship for engaging in port access work support and fuel loading work at ports, etc.

Support Vessels

Ⅱ Main Programs

○ Improve capabilities of UP-3D (¥12.5 billion)

Update onboard equipment and retrofit airframe to improve capability of supporting EW drills by vessels.

UP-3D

○ Refurbishment of Izumo-class destroyers (¥5.2 billion)

Procure landing guidance devices.

○ Service life extension device (Service life extension work for 3 destroyers, component procurement for 5 destroyers: ¥9.1 billion)

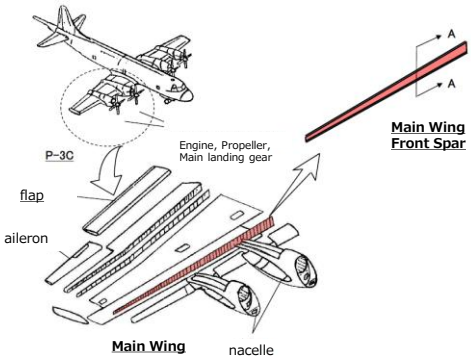
(Service life extension work for 6 submarines, component procurement for 5 submarines: ¥2 billion)

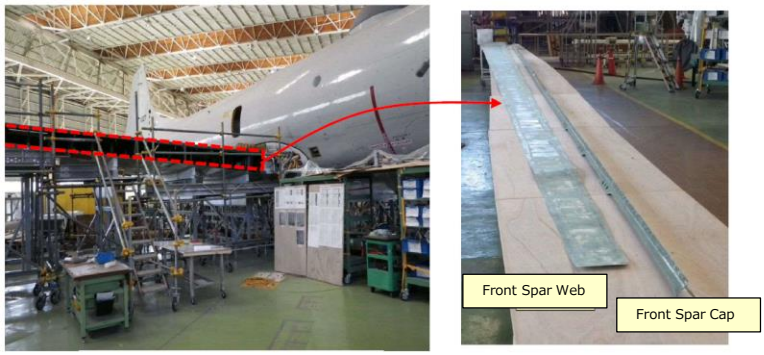
Secure operable ships by implementing service life extension for destroyers, submarines, transport vessels, and training vessels.

F-35B landing on an Izumo-class destroyer

○ Service life extension measures (¥2.1 billion)

Secure operable aircraft by implementing service life extension measures (repair of main wing spar) to P-3 and EP-3.





○ Procurement of vertical launch system (VLS) MK41 (¥78.7 billion)

Procure VLS for FFM (10 ships) as well as modernization equipment for Murasame- and Takanami-class destroyers (14 ships) in order to secure submarine response capabilities.

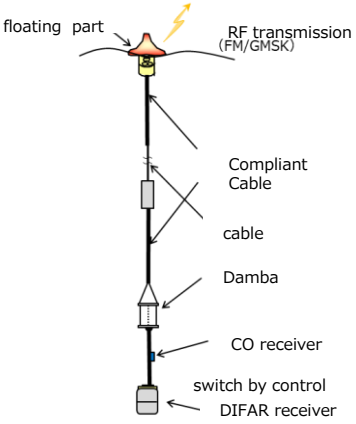
VLS MK41

○ Procurement of variable depth sonar system (¥18.5 billion)

Procure variable depth sonars (3 sets) as well as towed passive sonars (4 sets) for FFM in order to secure submarine response capabilities.

○ Procurement of Sonobuoys (¥9.6 billion)

Secure Sonobuoys to be used in submarine response training at units and training units in order to secure sufficient Sonobuoy and mission capability to search, discriminate, and persistently track underwater targets of the monitored country.



Sonobuoy

Ⅱ　Main Programs

○ Procurement of F-35A（8 aircraft：￥106.9 billion）【repost】
Secure air superiority by procuring the F-35A with excellent electronic warfare capabilities.
＊ Since it has been confirmed that it will be cheaper to conduct the final assembly and inspection by domestic company compared to importing completed aircraft for the next five years, domestic companies will conduct the final assembly and inspection for the procurement of F-35A aircraft from FY2023 to FY2027.


F-35A

○ Procurement of F-35B（8 aircraft：￥143.5 billion）【repost】
Improve flexibility of fighters operation by procuring the F-35B, which has excellent electronic warfare capability and can perform short field take-off and vertical landing.


F-35B

○ F-15 Upgrade Program
（18 aircraft：￥81.1 billion, initial cost: ￥81.6 billion）【repost】
Upgrade the electronic warfare capabilities and modify capabilities such as an increase in the number of loaded ammunitions.


F-15

○ F-2 Upgrade Program（9 aircraft：￥12.8 billion）【repost】
Upgrades and modifications such as anti-ship attack capabilities, network functions, etc.


F-2

○ Procurement of Rescue Aircraft（UH-60J）
（12 aircraft：￥94.9billion）
In response to the retiring of the UH-60J, maintain and strengthen the rescue posture, and develop the posture that can respond to various situations in a practical manner.


UH-60J

Conceptual Image of Cross-Domain Operations

5 Command and Control/Intelligence-related Functions

Approximately ￥458.8 billion （Approximately ￥305.3 billion excluding other areas)

- It is necessary to establish a seamless information gathering system by continuously gathering information on military trends in the areas surrounding Japan, and also by fundamentally reinforcing intelligence capabilities to deal with integrated information warfare including the cognitive dimension etc., which was seen in Russia's aggression against Ukraine.
- In order to conduct swift and certain command-and-control, the ability to share information in real time through resilient networks is required.
- The MOD/SDF is promoting the introduction and expanded application of AI in these fields.

Development of Command and Control Function

○ Development of Command and Control-related System（￥116.9 billion）
The following systems, etc., have been developed to strengthen SDF command and control system.
・Field communication system
・Fire-powered combat command and control system
・Future command and control system
・MSDF command and control/common infrastructure system, etc.

○ Development of Vessel-Equipped Information and Communications Infrastructure to Strengthen Offshore command and control Capabilities（￥800 million）
By developing the Information and Communications Infrastructure (JSII) to integrate vessel-equipped information systems, optimize the vessel systems and strengthen command and control capabilities at offshore.

○ Research on Acceleration of Decision-Making using AI（￥4.3 billion）
Conduct research on technology to support commanders' decision-making into equipment by analyzing the course of action using AI to cope with the complex and fast changing combat situations.

○ Research on Robust Cooperative Control Network Technology（￥6.7 billion）
Conduct research on communication networks that have excellent anti-interference characteristics and enable effective use of frequencies by wireless devices selecting its own frequencies and communication methods, etc.

Enhancing Information Gathering and Analysis System

○ Enhancing information gathering and analysis system
Expand the Defense Intelligence Headquarters (DIH), etc., to strengthen the MOD's information gathering and analysis capabilities regarding international military situations.

○ Expansion of Defense Attachés
The MOD/SDF will increase the number of defense attachés in the United Kingdom and Ukraine by one each, and will transfer its Kuwait attaché to Qatar.

○ Maintenance and Development of Intelligence Systems（￥24.9 billion）
Development of various information systems that can swiftly provide information that contributes to policy decision and unit operations.

○ Maintenance and Development of Equipment for Information Gathering and Analysis（￥96.6 billion）
Development of various equipment to constantly and continuously gather , process and analyze information on military trends, etc., in the vicinity of Japan.

○ Collection and Organization of Information Materials（￥1.7 billion）
Collection and organization of various information materials on the situation in the vicinity of Japan.

Responses to Integrated Information Warfare with Special Regard to the Cognitive Dimension

○ Strengthen the system for information collection, and analysis regarding information warfare.

○ Develop Functions to automatically collect and analyze open-source information utilizing AI（￥2.2 billion）.

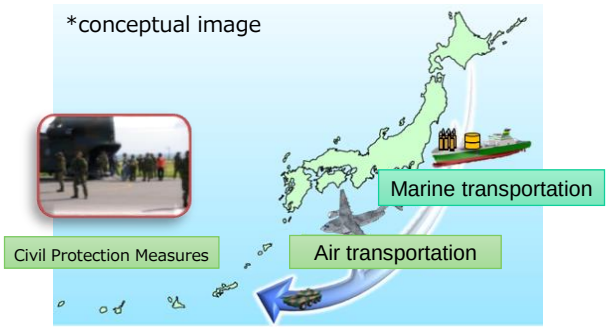
○ Procurement of public information gathering and analysis services
（￥300 million）
Collection, organization, and analysis of public information contributing to air operations through outsourced services.

6 Mobile Deployment Capabilities/Civil Protection

(Approximately ￥269.6 billion excluding other areas)

- Given the geographical characteristics of Japan, it is necessary to build up the capabilities to rapidly deploy units, as well as to set up the foundation necessary to do so.
- It is necessary to strengthen transport capabilities by acquiring various transport assets such as transport vessels, transport aircraft, and transport helicopters.

Promotion on Procurement of Transport Assets



Landing craft utility (LCU)
(conceptual image)

○ Reinforcement of Ground, Maritime and Air Transport Capabilities

In order to strengthen the transport capability to rapidly deploy the necessary units in response to attacks on Japan including its remote islands, the MOD/SDF will procure landing craft utility (LCU) (2 ships: ￥10.8 billion), transport aircraft (C-2) (2 aircraft: ￥59.7 billion), and utility helicopters (UH-2)(13 aircraft : ￥36.3 billion)
transport helicopter (MCH-101) (2 aircraft : ￥35.1 billion)
various trucks, etc. (2691 cars : ￥24.4 billion) .

Transport aircraft (C-2)

Maintenance and Development of Transport Assets

○ Sustainment and maintenance of aircraft including transport aircraft C-2,etc.
(￥17.5 billion)

Development of Transport and Supply System

○ In order to develop transport capability and supply system, the MOD/SDF strengthen transport and supply system in the southwestern region.
○ Research on the landing support system in islands without large-scale ports
(￥1.5 billion)
○ Development of the MSDF Logistics Infrastructure System (tentative name)
(￥13.4 billion)
Replacement of the MSDF construction, repair, maintenance and supply system with a software-based system used in the private sector to respond to the acceleration of unit operation

Private Maritime Transport Capabilities Utilization Project

PFI Ships (Hakuo)

○ Enhancement of Joint Transportation Readiness through PFI Ships (￥600 million)
Enhance readiness for joint transportation through implementation of an exercise using PFI ships to transport units and equipment and verification of port entry.

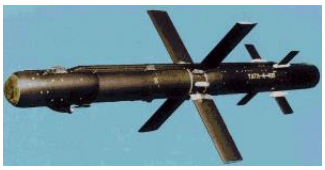
7 Sustainability and Resiliency

➢ In order to facilitate the operations of SDF, it is important to secure ammunition, and improve the number of available assets (resolving the shortage of parts), strengthen the facilities (improving the resiliency of the facilities), and reinforce the operational infrastructure (reinforcing the production system, securing the ammunition depots, etc.).

【Securing Ammunition】
Approximately ¥828.3 billion（Approximately ¥212.4 billion excluding other areas)

➢ The SDF will swiftly procure the required quantities of various types of ammunition necessary for continuous unit operations.
(Excluding “stand-off defense capabilities” and “integrated air and missile defense capabilities”)

○ Type-96 multipurpose missile system
（¥6.1 billion）
Missiles necessary for firing anti-vessels, anti-tanks


Type-96 multipurpose missile system
(conceptual image)

○ 5.56mm bullet（¥5.2 billion）
Munitions necessary for firing with a individual weapon


5.56mm bullet

○ 155mm high explosive shell（¥4 billion）
Munitions necessary for special forces to fire

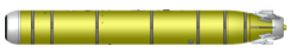

155mm high explosive shell

○ New air-to-ship missile for patrol aircraft（¥13.9 billion）

Significantly improved range, etc., compared to the conventional Type 91 air-to-ship guided missile.


New air-to-ship missile for patrol aircraft
(conceptual image)

○ Silent-type Torpedo with Power Unit（¥8.6 billion）
A new type of torpedo with quieter power compared to the conventional Type-18 Torpedo and improved stealthy performance.


Silent-type Torpedo with Power Unit
(conceptual image)

○ Type 12 Torpedo（¥12.4 billion）

Torpedo launched from a surface ship or aircraft, having high cruising performance and guidance and control performance, and capable of attacking a quieter submarine.


Type 12 Torpedo

○ Type 15 Mine（¥2.7 billion）
Mine that can be laid by dropping rails from a minesweeper mother ship.


AIM-120

○ AIM-120（¥33.5 billion）
Mid-range air-to-air missile to be equipped on F-35A/B and F-15 upgrade.


AAM-4B

○ AAM-4B（¥11.9 billion）
Mid-range air-to-air missile to be equipped on F-2 and F-15 aircraft.

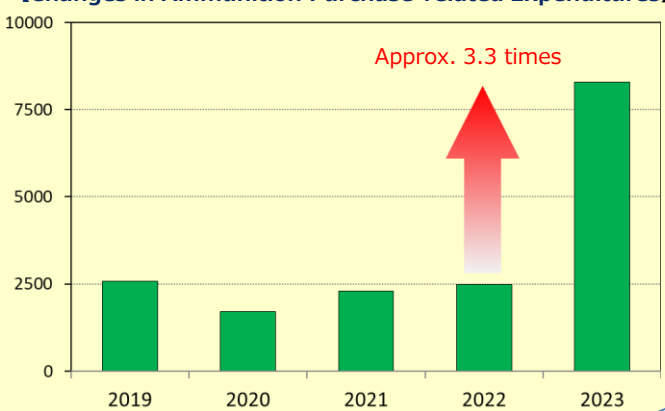

ASM-3A

○ ASM-3A（¥11.2 billion）
Air-to-ship missile to be equipped on F-2.

➤ Secure the required quantities of various types of ammunition necessary for continuous unit operations
（¥828.3 billion）
Including (“Stand-off defense capabilities” “Integrated air and missile defense capabilities”)

➤Enhancement of the Ammunition Production, etc.（¥161.8 billion）
Expansion of companies’ production lines to secure various types of ammunition, including stand-off missiles

【Changes in Ammunition Purchase-related Expenditures】



○ Maintenance of Ammunition Storage Facility for large munitions including stand-off missiles, etc. （￥5.8 billion）

○ Securing Fuel Necessary for Unit Operation

○ Development of Equipment, etc. for Inventory and Pre-Assembly Materials and Equipment

○ Procurement of Runway and Other Equipment Necessary for Improving Capabilities for Damage Recovery （￥700 million）

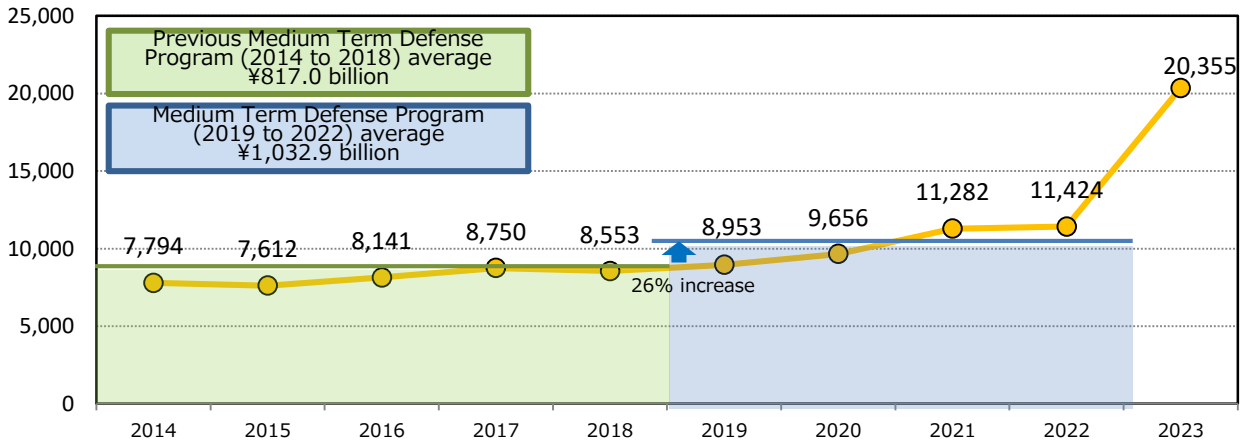
Ammunition Storage Facility

【Sustainment and Maintenance of Equipment】

￥2 trillion 35.5 billion（Approximately ￥1 trillion 793 billion excluding other areas）

○ Sustainment and Maintenance of Equipment （￥2trillion 35.5 billion）
In order to minimize non-operation assets due to parts shortage, etc. maximize the number of operationally available equipment, and maintain and improve unit capabilities to secure sufficient number of parts and securing expenses for ensuring equipment maintenance.

Trends in Cost of Equipment Sustainment and Maintenance



○ Promotion of Comprehensive Contracts, including PBL*(Performance Based Logistics)

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

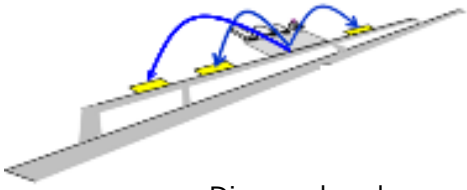
- Maintenance of Transport Helicopter (CH-47J/JA)
（￥3.6 billion）
Implemented maintenance through a PBL from FY2018.

Transport helicopter (CH-47J/JA)

- Maintenance of Gas Turbine Engines for Ships （￥11.3 billion）
Implemented maintenance through a PBL from FY2021 and expand the coverage.

Hyuga-class destroyer

【Improving resiliency of defense facilities】
Approximately ￥504.9 billion (Approximately ￥474 billion excluding other areas)

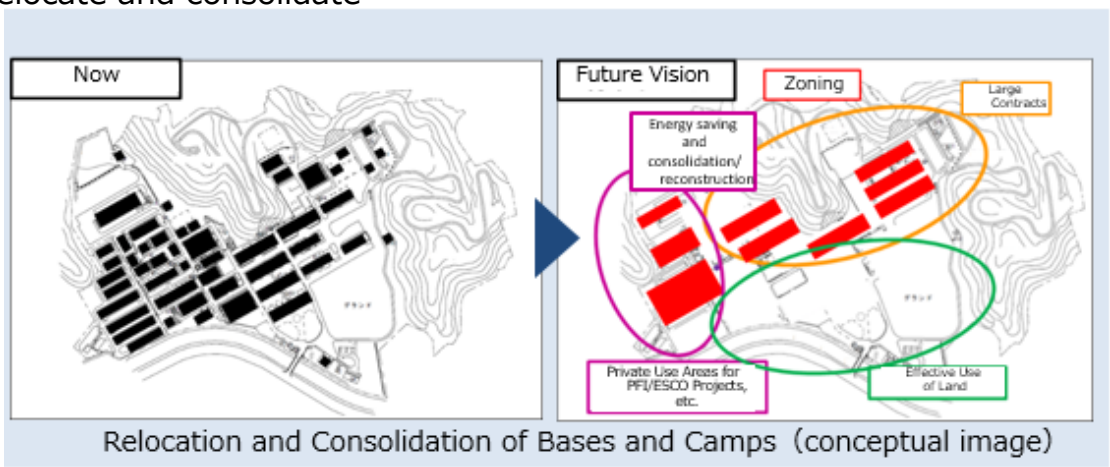


Dispersal pad

○ Securing ammunition depots for the safe storage of large ammunition for stand-off missiles, etc. (￥5.8 billion) 【repost】

○ Improving the resiliency of SDF facilities (￥36.4 billion)
Underground installation of main headquarters, dispersal pads for fighters, electromagnetic pulse protection, etc.

○ Renovating existing facilities (￥86.8 billion)
Provide protective measures against aging and earthquake, reinforce facilities, and relocate and consolidate



Relocation and Consolidation of Bases and Camps (conceptual image)

○ Measures against natural disasters such as tsunami and flood (￥27.5 billion)
Promotion of countermeasures against tsunami and flood to maintain and enhance functions in the event of a large-scale natural disaster

Elevation of Substation Facilities (Measures for Tsunami)

○ Development of facilities associated with the establishment of new units and the introduction of new equipment, etc. (￥310.3 billion)

・Development of GSDF facilities accompanied with the establishment of GSDF Saga Camp (tentative name) in Ground Self-Defense Force (￥106.8 billion)

・Development of MSDF facilities in Sasebo (Sakibe East Area (tentative name)) (￥4.1 billion)

・Development of ASDF facilities for F-35 (A/B) in ASDF (￥15.2 billion)

GSDF Camp Saga (tentative name) apron (conceptual image)

Facilities for F-35 (A/B) (conceptual image)

Sakibe East Area (tentative name) (conceptual image)

1 New Efforts for Early Deployment of Defense Equipment

- In light of the current security environment, in which the military use of cutting-edge civilian technologies is changing the warfare, it is necessary to fundamentally reinforce defense capabilities at an epoch-making speed, by flexibly incorporating technologies that have made remarkable advances in the private sector and off-the-shelf products, etc.
- For acceleration of defense equipment deployment, MOD/SDF will receive proposals (Note 1) from the companies including defense contractors or incorporate advanced civilian technologies through start-up companies, domestic research institutes, academia and other organizations.
- In order to address these policy issues, the Bureau of Defense Policy takes the lead in creating a whole-of-MOD team consisting of more than 200 personnel from the Internal Bureaus, each Staff's Office, and the Acquisition, Technology and Logistics Agency.
- Among the projects that could directly affect the SDF's current and future operations, such as stand-off defense capabilities, unmanned asset defense capabilities, Artificial Intelligence (AI), and next-generation information and communications, those programs that are particularly urgent and significant from a policy perspective will be equipped within the next five years and fully operated within approximately the next ten years. The government and the private sector will closely cooperate and relevant researchers, operators, and policy-makers will work together to remove various obstacles based on a problem-solving perspective (Note 2) .

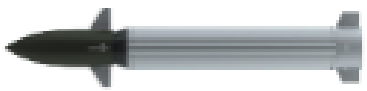
(Note 1) This approach will be continued after next fiscal year, and MOD/SDF is open for proposals from companies that contribute to early deployment.
(Note 2) From the perspective of flexible and agile budget implementation, the Internal Bureau budgets expenses (￥250 billion) for projects in fields with rapid technological development, such as utilization of existing civilian technologies, off-the-shelf products, and overseas equipment.

【Examples of Project for Early Deployment】

- Stand-off Defense Capabilities
  - ○ Development/Production of upgraded Type-12 Surface-to-Ship Missile (Development ：￥33.8 billion, Production ：￥93.9 billion) 【repost】

Upgraded Type-12 Surface-to-Ship Missile (conceptual image)

  - ○ Research/Production on Hyper Velocity Gliding Projectile (HVGP) (Research：￥15.8 billion, Production: ￥34.7 billion) 【repost】



Hyper Velocity Gliding Projectile (HVGP) (conceptual image)

  - ○ Research on Hypersonic Missile（￥58.5 billion）【repost】

Hypersonic Missile (conceptual image)

- Maritime Assets
  - ○ Research on UUV control technology（￥26.2 billion）【repost】

Ⅲ Common Infrastructure

【Example of Project for Early Deployment (continued)】

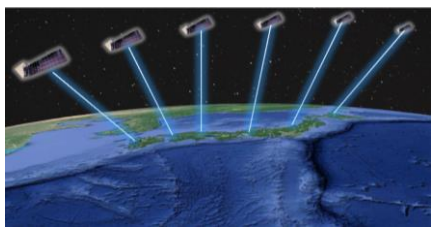
Utility/Attack UAV
(conceptual image)

- Artificial Intelligence (AI)
  - ○ Research on Acceleration of Decision-Making using AI (￥4.3 billion) 【repost】

- Unmanned asset defense capabilities
  - ○ Operational verification of utility/attack UAVs（￥6.9 billion）【repost】
  - ○ Operational verification of miniature attack UAVs （￥3 billion）【repost】
  - ○ Operational verification of reconnaissance, security and surveillance UGV/UAV（￥8.1 billion） 【repost】
  - ○ Research on UGV System（￥6.8 billion） 【repost】

Miniature Attack UAV
(conceptual image)

- Next-generation information communication
  - ○ Use of low earth orbit communication satellite constellation service（￥0.2 billion） 【repost】

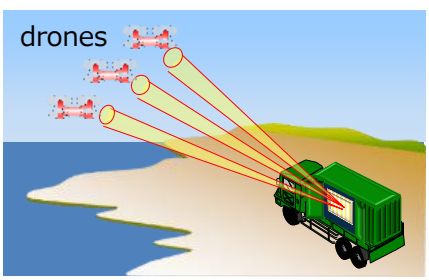


Satellite Constellation (conceptual image)

- Space Domain
  - ○ Technological demonstration necessary to improve response capabilities such as satellite-based HGV detection and tracking （￥4.6 billion） 【repost】
  - ○ Demonstration of common key technologies necessary for utilization of the space domain（￥8 billion） 【repost】

- HPM radiation
  - ○ Upgrade of Network Electronic Warfare System（NEWS） （￥1.4 billion） 【repost】
  - ○ Procurement of HPM radiation device to respond small drones (UAV)（￥2.5 billion） 【repost】
  - ○ Research on future railgun（￥16 billion）

Network electronic warfare system



HPM radiation device
(conceptual image)

2 Reinforcing Defense Production Base (Approx. ¥146.3billion)

(Excluding other areas : Approx. ￥97.2 billion)

➢ The defense industry is Japan's defense capability itself, and as a part of defense capability development, Japan will implement fundamental initiatives in order to promote maintaining and strengthening of the Japan's defense industry and to build a powerful and sustainable defense industry, and strengthen the response to various risks surrounding the defense industry. At the same time, MOD will take measures for expansion of defense equipment market.

（1） Building a Powerful and Sustainable Defense Industry

○ Project to Strengthen the Industry Base for Defense Equipment (¥36.3 billion)
Support companies to maintain and strengthen domestic defense Industry and technological bases, including to strengthen cybersecurity.

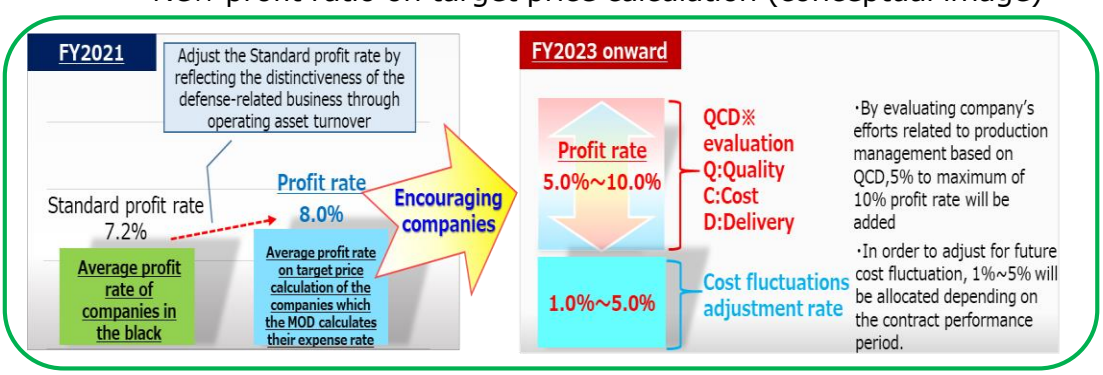
・Improve defense equipment manufacturing process by installing cutting-edge technologies such as 3D printing, AI, etc.

・Implement comprehensive/integrated cybersecurity measures not only for defense sectors of the companies that have direct contractual relationships with the MOD, but also for subcontractors.
(Companies applying cost accounting system will be subject to another measure (See p.36))

・Implement measures against supply chain risks including ensuring supply chain resiliency
・Support Smooth business succession from companies withdrawing from the defense industry.

○ Research on maintaining and improving the technological bases for defense-unique conventional technologies (¥2.4 billion).
○ Establish a new mechanism to reflect companies' efforts in cost reduction activities and risks associated with the contract performance period.

New profit ratio on target price calculation (conceptual image)



*System which reflects companies' efforts such as Quality management, Cost management, Delivery management in the defense sectors into profit ratio

Ⅲ Common Infrastructure

（2）Response to various cyber threats surrounding the defense industry

○ A new division called “Defense Industrial and Technology Security Division(tentative name)” will be established to strengthen industrial security, based on international standards, including cybersecurity, and also to strengthen sensitive technology security.

○ Efforts in the Application of “Standards on Cybersecurity Measures for Defense Industry”
Expense burden for cybersecurity measures taken by the defense industry based on the “Standards on Cybersecurity Measures for Defense Industry” will be addressed in defense procurement. (Measures for companies applying cost accounting system)
*¥52.6 billion will be allocated as a part of the expenses related to defense procurement.

○ Development of Defense Security Gateway (¥44.1 billion)
Implement a “public-private shared cloud” and provide defense related companies with security functions that meet the “Standards on Cybersecurity Measures for Defense Industry”.

（3）Expanding the Sales Channels of the Defense Industry, etc.

○ Funds and Grant for Facilitation Transfer of Defense Equipment (¥40 billion)
・ATLA will establish a fund that allows stable and flexible financial contributions aiming at facilitating transfer of defense equipment overseas through public-private cooperation which is a key political tool in diplomacy and defense policy as well as supporting private sector’s activities related to transfer of equipment.

・The government will subsidize the cost of modifying defense equipment specifications.

○ Feasibility Studies for Overseas Transfer of Defense Equipment (¥200 million)
ATLA will conduct feasibility studies to grasps the potential needs of targeted countries in order to make proposals on transfer of defense equipment in cooperation with the private sectors.

○ Defense Technology Cooperation with Southeast Asian Countries (¥300 million)
In order to contribute to the realization of the transfer of Japan-made equipment, ATLA provides educational support, etc., for the maintenance of equipment, leveraging Japan’s technical strength, through equipment and technology cooperation with Southeast Asian countries.

○ Efforts toward Rationalizing FMS Procurement (¥300 million)
Utilizing experts who have deep knowledge on the U.S. government procurement procedures in order to rationalize FMS procurement and to enhance our negotiation capability toward the U.S. government.

○ Expand the Common Maintenance Platform for Ospreys of Japan and the U.S. (¥7.6 billion).
Continue construction of new hangars for the Planned Maintenance Interval (PMI) for Ospreys of Japan and the U.S. at GSDF Camp Kisarazu.

Osprey (V-22)

3 Research and Development (Approx. ¥898.6 billion)

(Excluding other areas : Approx. ¥232 billion)

- The transformation in warfare approaches is accelerating against the background of the rapid progress of science and technology. We will make intensive investment in equipment/technology that are directly licked to future battles, and we will drastically reduce research and development period by introducing novel methods into the research and development process, for early realization of the capability to respond effectively in future warfare.
- Differences in technologies can determine the outcome of warfare, so in order to secure technological superiority in the future and realize advanced capabilities ahead of other countries, we will incorporate a wide range of advanced commercial/basic technologies, and while collaborating with the projects in related ministries and agencies, we will intensively invest in technologies that can be used for defense purpose and acquire those technologies as early as possible.

（1）Stand-off Defense Capabilities

○ Development of upgraded Type-12 surface-to-ship missile (surface-, ship, and air-to-ship missiles) (¥33.8 billion) 【Repost】
Continue development of upgraded Type-12 surface-to-ship missile (surface-, ship, and air-to-ship missiles)

○ Research on Hyper Velocity Gliding Projectile (HVGP) (¥15.8 billion)【Repost】
Continue research on HVGP which glides at high speed and hits ground targets

○ Development of upgraded HVGP-(¥200.3 billion)【Repost】
Develop upgraded version with extended range from early deployment type

○ Research on Hypersonic Weapons-(¥58.5 billion)【Repost】
Steadily promote research and development of hypersonic missiles which fly at hypersonic speeds (above 5 times the speed of sound) and are difficult to be intercepted.

○ Research on new anti-ship missiles (¥34.2 billion)【Repost】
Develop prototype of modular, multi-mission missiles that feature longer-range, lower radar cross-section (RCS) and higher mobility technologies.

○ Development of target observation rounds (¥22.2 billion)【Repost】
Develop target observation rounds to search, detect, identify and collect information of the ground target or enemy vessels while avoiding and breaking through enemy's air defense network and moving into the vicinity of the target.

（2）Capabilities to Respond to HGVs, etc.（Integrated Air and Missile Defense Capabilities）

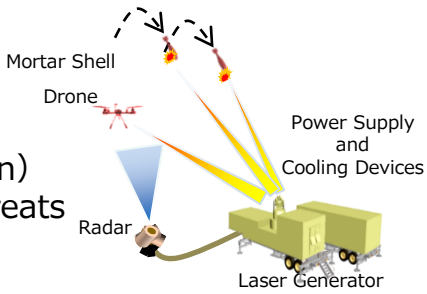
○ Development of upgraded Type-03 Medium-Range Surface-to-Air Missile (modified) (¥75.8 billion)
Improve capability to respond to HGVs and ballistic missiles.

○ Research on responding to HGV threats (¥58.5 billion)【Repost】
Establish elemental technologies as early as possible for responding to HGV threats that travel at hypersonic speeds at high altitudes with high maneuverability
*HGV : Hypersonic Glide Vehicle

Research on responding to HGV threats (conceptual image)

○ Research on utilizing long endurance UAVs for missile defense (¥100 million)
Conduct research on detection and tracking of HGVs by utilizing long endurance UAVs.

（3）Capabilities to Respond to Drones and Swarm Attacks (Integrated Air and Missile Defense Capabilities)



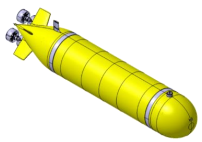
Research on high-energy laser system (conceptual image)

○ Research on high-energy laser (HEL) systems （¥4.4 billion）
Conduct research on technologies to intercept airborne threats by HEL, and gain the capability to deal with drones more quickly at a lower cost.

○ Research on high-power microwaves (HPM) systems （¥100 million）
Conduct research on technologies to disable drones and other targets by radiating HPM, to acquire the capability to effectively address the threats by drone swarming.

○ Research on Efficient Target Assignment System for Response Against a Swarm of UAVs （¥5.3 billion）
Conduct research on target detection and efficient target assignment systems to optimize interception of swarming UAVs.
*UAV： Unmanned Aerial Vehicle

（4）Unmanned Assets Defense Capabilities


Research on long-term operational type UUV technology (conceptual image)

○ Research on UUV control technology （¥26.2 billion）【repost】
Conduct research on technologies to control an UUV by the commanding UUV to enhance operational capabilities in the underwater domain.
*UUV : Unmanned Underwater Vehicle

○ Research on UUV Technology for long term operation （¥900 million）【repost】
In anticipation of future complex and various missions, conduct research on long-term operational UUVs that enables to add functions and performance of UUVs to timely meet operational needs by just adding modules.

○ Research on Combat UGV (¥6.8 billion)【repost】
Conduct research on operational support technology to control multiple unmanned combat vehicles from a manned vehicle, autonomous driving technology, etc.
*UGV : Unmanned Ground Vehicle

○ Research on Swarm Control Technology for Operating Swarm of a Variety of UxVs* (¥500 million)
Conduct research on technology for operating a swarm consisting of a large number of UxVs with flexibility by a small number of operators.
* UxV: Unmanned X Vehicle (E.g. UGV, UAV, UUV, USV, etc.)


Swarm flight by drones (conceptual image)

(5) Efforts for the Next-generation Fighter Aircraft (￥105.4 billion)

○ Development of the next-generation fighter aircraft (¥102.3 billion)

- Promote Japan-UK-Italy joint development of the next-generation fighter aircraft by conducting preliminary design of the aircraft and initiating other various work such as engine manufacturing.

○ Research related to the next-generation fighter aircraft (¥3.1 billion)

- Conduct research on fighter engine efficiency improvement and others
- Prepare to test the multi-aircraft flight control technology (for the realization of combat-support UAVs which collaborate with the next-generation fighter and other manned aircraft).

COLUMN

Japan-UK-Italy Joint Development of the Next-generation Fighter Aircraft

COLUMN

◆ Significance of the Development

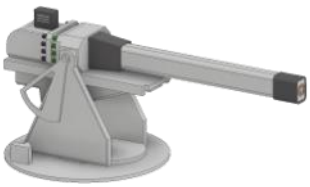
In December 2022, Japan, the UK and Italy announced the Global Combat Air Programme (GCAP) to jointly develop a next-generation fighter aircraft.

Next-generation fighter aircraft (*The images for illustration purposes only.)

- **Working towards the in-service date of 2035, the three countries will bring together their technological advantages and share development costs and risks to develop an advanced fighter which will ensure air superiority in the future.**
- **This programme will maintain/strengthen Japan's defense production and technological bases through increasing the number of aircraft production and raising next generation of internationally successful engineers.**
- **This trilateral cooperation will not only lay a foundation for a wider collaboration with the UK and Italy but also contribute to the stability of Indo-Pacific region and Europe in times of increasingly severe security environment.**

Ⅲ Common Infrastructure

（6）Reinforcing Other Deterrence Capabilities



Research on future railguns
(conceptual Image)

○ Research on future railguns （¥16 billion） 【repost】
Conduct research on future railguns which are capable of firing projectiles at high muzzle velocity to improve the capability of intercepting various airborne threats.

○ Research on Broadband Electromagnetic Wave Receiving Technology （¥600 million）
Conduct research on technologies related to slim broadband antenna and broadband receivers that can be mounted on small satellites.

○ Research on Acceleration of Decision-making using AI (¥4.3 billion) 【repost】
Conduct research on technology to support commanders' decision-making into equipment by analyzing the course of action using AI to cope with the complex and fast changing combat situations.

○ Research on Cyber Protection Technology-for Equipment Systems
(¥400 million) 【repost】
Conduct research on cyber protection technologies to avoid any damage by cyberattacks from spreading as well as enable continuous system operations, and reflect the outcomes into equipment systems such as Destroyers.

Conduct research on cyber protection technologies for equipment systems such as vessels to prevent the spread of damage caused by cyber attacks.

○ Research on EMP Equipment （¥1.5 billion）
Conduct research on EMP ammunition and laying EMP devices which emits powerful electromagnetic pulses to disable the sensors and information systems of opponents' units.

○ Research on Urgent Armoring Technologies （¥200 million）
Conduct research on urgent armoring materials to rapidly and easily provide protective performance to unarmored vehicles.

○ Measures contributing to the early practical weaponization of game changing technologies （¥15.3 billion）
To accelerate the development of defense equipment, conducting research on cutting-edge technologies that could be game changers as well as acquiring important configuration technologies by the private sector in a short period.

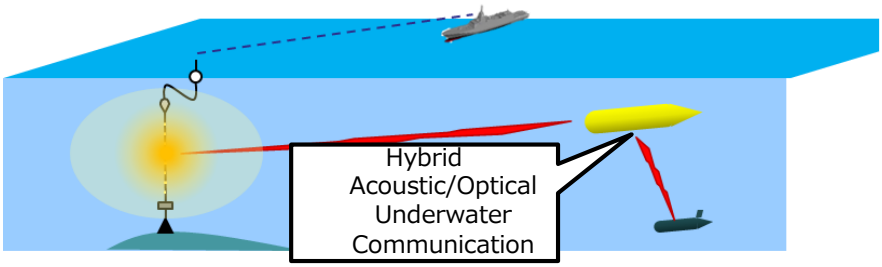
○ Development of A Stand-off Electronic Warfare Aircraft （¥8.3 billion） 【repost】
Develop a stand-off electronic warfare aircraft that supports the execution of SDF air operations by effectively jamming signals.

○ Development of facilities and networks for higher security level （¥38 billion）
Develop facilities and networks for higher security level in light of based on international standards to research and develop aircraft and other defense equipment.

（7）Discovery, Fostering, and Utilizing of Cutting-edge Technologies

○ Bridging Research（¥18.8 billion）
Significantly expand bridging research on promising research on advanced technologies to incorporate into defense use by fostering the advanced technologies that contribute to the research and development of innovative defense equipment from among the results of research in the civilian sector and in the government investment in science and technology.

・ Research on real-time underwater communication technology for UUVs (¥4 billion)
Conduct research on hybrid acoustic/optical communication technology that automatically switches between the two communication methods to make the most of the advantages of acoustic and optical communication for the purpose of improving UUV's communication capabilities.



Research on real-time underwater communication technology for application to UUVs（conceptual image）

○ Study for the establishment of a new research institute（¥20 million）
Conduct research on research systems and methods for triggering defense innovation towards the establishment of a new research institute (FY2024 onward) that will be contribute to creating groundbreaking defense equipment.

○ Innovative science & technology initiative for security （¥11.2 billion）
Promote the "Innovative Science & Technology Initiative for Security" program in which ATLA advertises for and commissions basic researches on innovative and emerging technologies to be conducted at universities, etc.

4 Elements Supporting Defense Capabilities

➢ In order to support the SDF's performance of its duties, it is necessary to promote various measures such as reinforcing the human resource base(securing human resources, improving treatment, utilizing human resources from private sectors, etc.) and reinforcing medical functions (enhancing functions of SDF Hospitals, etc.).

【Reinforcing Human Resource Base】

(1) Measures to Secure Maritime Self-Defense Force Naval Vessel Crew

Work for improvement of the vessel work environment, etc. to secure MSDF naval vessel crews.

○ Development of in-ship wireless LAN environment (¥100 million)
Expansion of wireless communication environment to accommodation spaces

○ Expansion of the use of re-enrollment of SDF personnel

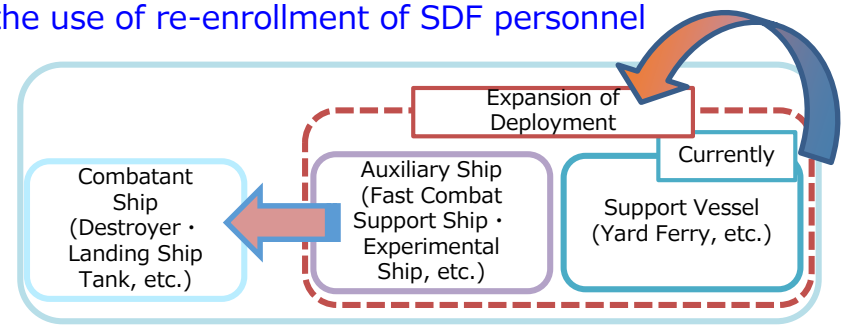


Image of the expansion of re-enrollment of SDF Personnel

(2) Measures to Secure Excellent Human Resources

Work to enhance recruitment and re-employment support to excellent human resources.

A. Enhancement and Reinforcement of Recruitment

○ Digitalization of Recruitment PR(¥400 million)
Promote the digitalization of recruitment PR based on the fact that the Internet has become the central means of gathering employment information for the people eligible for recruitment.

○ Reinforcing the Functions of the Provincial Cooperation Offices system (¥1.1 billion)
Reinforcing the PCO for the recruitment operations.

○ Expansion of the SDF Scholarship Student System (¥30 million)

Videos and banner advertisements (conceptual images)

B. Enhancement and Reinforcement of Reemployment Support

○ Strengthening Public Relations for the Reemployment PR (¥80 million)
Procurement of the tablet-type terminals as explanatory materials for companies, etc., and creating PR videos to promote the usefulness of retiring SDF personnel, etc. for the sake of effective PR for the reemployment

○ Enhancement of career guidance (¥300 million)
Introduce private career consultant and online consulting system that can be utilized in a timely manner.

○ Enhancement of job training opportunities (¥800 million)
Expand opportunities for skill training and online classes for qualifications and licenses which is advantageous for reemployment.

C. Others

○ Promotion of Harassment Prevention Measures (¥20 million)
- Outsourcing counselors for the Harassment Hotline
- Conducting group education on harassment prevention
- Holding an anger management training for newly assigned managers

○ Studies and Research aimed at Curbing Mid-Career Retirements by SDF Personnel (¥60 million)
Implement awareness surveys on the attitudes of SDF personnel and studies and research into measures, etc. to curb mid-career retirements in private companies and foreign armed forces, in order to collect information for consideration of measures to curb mid-career retirements by SDF personnel

Personnel undergoing harassment prevention education

(3) Promotion of Further Participation of Female Personnel and Working Style Reform and Improvement of Living and Work Environment, etc.

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

A. Promotion of Further Participation of Female Personnel

○ Improvement of Infrastructure for Education, Living, and Work Environment for Female SDF Personnel (¥5.7 billion)
- Development of women's quarters in barracks
- Make renovations to improve living and work environments for female SDF personnel (renovations of lavatory and bathing facilities)
- Development of women's quarters on vessels, in particular, submarines

Dolphin Mark awards ceremony

○ Mentor Training; Hiring External Counselors for Female SDF Personnel (¥700 million)

Development of Women's Quarters (Installation of corridor doors in front of shower rooms on naval vessels)

B. Promotion of Working Style Reform

○ Implement the Digitalization of Administrative Documents that will facilitate Remote Work (¥20 million)

○ Improve the Work Environment by Promoting a Paperless Office and Space-saving Operations to Create a Better Workplace (¥30 million)

C. Support for Work-Life Balance

○ Maintenance and Improvement of Workplace Childcare Facilities (¥80 million)
Provide the supplies necessary for the maintenance of workplace childcare facilities so that personnel can balance their work with parenting and create a workplace that enables them to concentrate on their duties.
- Provision of supplies in workplace childcare facilities
- Refurbishment of workplace childcare facilities

Personnel looking after children temporarily

○ Provision of Supplies for Temporary Childcare Service during Emergency Visits for the Office (¥20 million)
Provide the supplies necessary for temporary childcare service for personnel in SDF camps, bases, etc. at the time of an emergency operation, such as a disaster relief operation, etc.
- Provide supplies (safety mats, partitions, etc.) for temporary childcare service during emergency visits for the office
- Participate in courses designed to improve childcare skills for temporary childcare service during emergency visits for the office
- Implement temporary childcare service drills, assuming emergency operations

D. Promotion of Improvement of the Living and Work Environment

○ Construct and Maintain SDF Facilities and Secure Equipment, Daily Consumables and Clothing to Improve Living and Work Environment for SDF Personnel.

・ Renovations, etc. of housing (¥21 billion)
・Development of housing necessary for introducing and reorganizing units as well as ensuring readiness (¥13.5 billion)
・Bulk purchase of lease housing (¥59.8 billion)
・Construction of barracks, office buildings, etc. (¥146.4 billion)*
・ Procuring equipment and daily consumables, etc. (¥4.9 billion)*
・ Procuring uniforms, work clothes, and other clothing (¥20.3 billion)
・Improvement of infrastructure for education, living, and work environment for female SDF personnel (¥5.7 billion)【repost】

*Air-conditioning, which has a direct impact on the health of SDF personnel, is given priority (¥42.9 billion)

E. Initiatives for Raising Awareness which Contribute to Reinforcing the Human Resource Base

○ Initiatives for Child Care and Nursing Care (¥20 million)
• Lecture meetings by external experts who have specialized knowledge and the creation of pamphlets
○ Initiatives for Harassment Prevention (¥8 million)
• Lectures by external experts who have specialized knowledge, group education for counseling staff and personnel officers, and the creation of posters and brochures
○ Initiatives for Mental Health (¥900 thousand)
• Lectures by external experts who have specialized knowledge, education roadshow by internal instructors, and the creation of posters and brochures
○ Initiatives for Maintaining Ethics Pertaining to the Duties of SDF Personnel and the Prevention of Drug Abuse (¥700 thousand)
• Lectures by external experts who have specialized knowledge and the creation of posters and broachers

F. Improve Treatment Taking Into Account the Special Nature of the Missions and Work Environment of SDF Personnel

○ Provisions of allowances to radar site staff who conduct surveillance operations (¥20 million)
Provide SDF-unique allowances for radar site staff who conduct surveillance operations under harsh working environment.

(4) Enhancement of Educational and Research System

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

A. National Institute for Defense Studies

○ Enhancing International Research Exchanges (¥10 million)
Host international policy simulation meetings with research institutes from the U.S., Australia, and Europe, enhancing trust and presence in terms of policy simulations, and establishing inter-organizational cooperation
○ Newly establish “Cyber Security Office” in NIDS 【repost】


International Conference on Policy Simulation “Connections Japan 2022”

B. National Defense Academy

○ Improvement of the Living Environment of the Cadets (¥200 million)
Provision of supplies, etc.
○ Maintenance and Enhancement of the Level of Researches and Education Standard (¥ 500 million)
Procure the equipment and materials required for defense basic research including dual-use technology.

C. National Defense Medical College

○ Functional Improvement on National Defense Medical College (¥1.9 billion)
Developing clinical training for SDF medical officers and nurses, etc. who work on the leading-edge of highly technical medical practice with empowering equipment for stronger collaboration with SDF

○ Effective Support to Military Medicine Research in National Defense Medical College (¥400 million)
Encouraging the researchers in National Defense Medical College, that contributes to SDF operation and to the clinical training in National Defense Medical College

D. Enhancement of Cyber Educational Base in the Schools and the Academy

○ GSDF System and Signal/Cyber School (¥200 million) [repost]
In order to strengthen the cybersecurity posture, reorganize the GSDF Signal School into the GSDF System and Signal/Cyber School (tentative name), and procure facilities, equipment, etc., for cyber education.

○ GSDF High Technical School (¥200 million)
Procure the equipment, etc. necessary for the System/Cyber Specialized Course.

○ National Defense Academy (¥100 million)
- Enhancement of the literacy education for the cadets to gain a good grounding in cyber matters (trial)
- Enhancement of cyber education, and consideration of collaboration with parties outside the Academy
- Maintenance and Enhancement of the Level of Researches【repost】

(5) Promotion of Efforts Related to SDF Reserve Personnel and others for Continuation of Operations

Promote the deployment of SDF Ready Reserve and Reserve Personnel in a broader range of fields and opportunities and the efforts to improve the capacity sufficiency rate of SDF Reserve Personnel and others.

○ Research and Studies on the Development of the Management Support System for SDF Reserve Personnel and others (tentative name) (¥40 million)
Conduct the research and studies for updating the current communication and confirmation functions, the response confirmation system, which JGSDF has been operating since FY2021 (a system which can confirm each personnel's safety and call-out availability via email, etc.), in order to make it possible for the three SDF branches jointly to coordinate and perform the procedures on the network.

○ Procurement of Uniforms, Accouterments, etc. (¥200 million)
Promote the systematic updating of the uniforms of the SDF Reserve Personnel, etc. and the maintenance of deteriorated accoutrements, etc.


Scene at a disaster relief operation

(6) Employment of technologies and human resources in the private sectors

As shrinking and aging population with a declining birth rate progress, build a posture where the diversifying duties of the SDF can be accurately executed by effectively employing technologies and human resources in the private sectors.

○ Utilization of external resources for AI adoption (¥500 million)
Utilize external AI experts with advanced skills to offer advice for planning pertaining to the introduction of AI and practical guidance for building AI application systems, etc.

○ Employment of AI workforce education courses (¥300 million)
Provide practical educational courses including programming, primarily for personnel engaged in AI-related operations.

【Enhancement of Medical Functions】

Reconstruct the core SDF hospitals, and promote enhanced functions in SDF hospitals, for example, by adding the necessary medical departments, etc., in order to upgrade the functions of SDF hospitals.
Furthermore, build a posture to ensure that casualties can be evacuated quickly from the front line to SDF hospitals, etc. behind the lines in an emergency, and in order to enhance the medical capabilities in the units, procure the necessary equipment in the Medical Squadron and strengthen health functions in the units.

○ Improvement of Specialized Treatment Capabilities at SDF Hospitals, etc.

Enhance medical capabilities for treating those wounded in war by reconstructing the SDF Naha Hospital, which will act as the medical base in Okinawa during contingencies in the southwestern region, as well as the SDF Fukuoka and Yokosuka Hospitals, along with increasing the number of medical departments.

・Study for Reconstructing the SDF Naha Hospital (¥100 million)

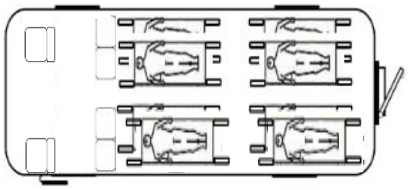
SDF Fukuoka Hospital after Reconstruction (conceptual image)

- Civil engineering and work area work for the reconstruction of the SDF Fukuoka Hospital (¥300 million)
- Preparatory work associated with the reconstruction of the SDF Yokosuka Hospital (¥9.4 billion)

○ Enhancement of medical evacuation ability for those wounded in war

Introduce air medical evacuation training device to conduct training under aircraft-unique situations. Additionally, procure large ambulance, etc., capable of simultaneously transporting several wounded patients from transport aircraft to the destinations.

・Introduce of air medical evacuation training device (¥200 million)
・Procure large ambulance, etc. (¥700 million)



Left: during air medical evacuation training, center: conceptual image of evacuation from a transport aircraft to an ambulance, right: large ambulance (conceptual image of inside)

○ Improvement of First-aid Capability on the Frontline

Develop educational material so that frontline first aid medical staff can persistently undergo the skills maintenance training necessary for them to carry out emergency medical care for wounded personnel. Furthermore, strengthen first-aid capability by developing a field surgical system for damage control surgery and developing the equipment necessary for securing and stockpiling blood products for use in blood transfusions.

- Development of a field surgical system (¥200 million)
- Procure educational material for improving first-aid skill (¥40 million)
- Development of autonomous equipment for securing and stockpiling blood products for blood transfusions (¥90 million)

Field surgical system (for divisions and brigades) (Left: outside, center: inside, right: during training)

○ Research on Urgent Armoring Technologies (¥200 million) 【repost】

5 Strengthening the Japan-U.S. Alliance and Measures for Fostering Harmony with Local Communities

Steadily implement the initiatives for realignment of the U.S. Forces to strengthen the deterrence and response capabilities of the Japan-U.S. Alliance while mitigating impacts on local communities

While SDF and the U.S. Forces expand and diversify their activities, as well as fundamentally reinforce the defense capabilities, MOD will steadily implement measures to harmonize defense facilities with surrounding areas while also promoting measures to ensure the smooth and effective stationing of the U.S. Forces in Japan to gain further understanding and cooperation from local communities

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

¥609 billion

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

○ Project for Relocation of the U.S. Marine Corps Stationed in Okinawa to Guam (¥900 million)

Construction of the Futenma Replacement Facility

Realignment-Related Measures in Japan

○ Project for realignment in Okinawa (¥252 billion)

・Relocation of MCAS Futenma (¥191.2 billion)

Construction of the Futenma Replacement Facility, etc. (¥188.2 billion)

Futenma refurbishment (¥3 billion)

・Return of land areas south of Kadena Air Base (¥60.7 billion)

○ Project for the relocation of the carrier-based aircraft (¥303 billion)

Facility development of runway, etc. on Mageshima

Facility Development on Mageshima

○ Project for contingency use (¥4.2 billion)

○ Project for training relocation (¥8.9 billion)

○ Project for smooth implementation of realignment-related measures (¥40.1 billion)

【SACO-Related Expenses】

¥15.2 billion

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

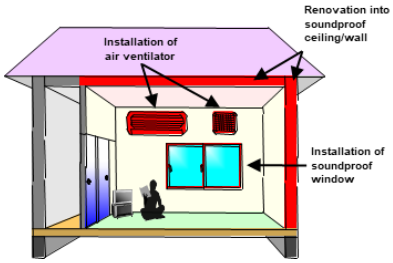
【Promotion of Base-Related Measures, etc.】

(1) Expenses Related to Measures for Communities Around Bases **¥126.7 billion**

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

○ Implementation of Soundproofing Projects for Residences Around Air Bases, etc. (¥54.7 billion)

Increase the budget to further promote the projects so that the number of households on waiting list can be reduced in an early manner



Example of Residential Soundproofing

Conduct a survey for restoration of functions around maneuver areas

○ Implementation of Projects to Improve the Living Environment of Areas Around Defense Facilities (¥72 billion)

・Subsidization for the development of living environment facilities, etc.

Increase the subsidy rate for gymnasiums in remote island areas that can be also used as evacuation facilities

Expand the coverage of applicable facilities for subsidization


Gymnasium

・Implementation of projects covered by the Specified Defense Facilities Environment Improvement Adjustment Grants (development of public facilities and implementation of so-called soft projects such as subsidization for medical expenses)

Increase the budget taking into consideration the strong requests from local municipalities

・Establishment of a training grant (tentative name) to respond to the expansion and diversification of aircraft training


Night-Soil Treatment Plant

(2) Host Nation Support (Cost Sharing for the Stationing of U.S. Forces in Japan) **¥223.2 billion**

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

○ Cost Sharing under the New Special Measures Agreement (SMA) (¥156 billion)

(
Labor cost (¥129.6 billion)
Utilities cost (¥23.4 billion)
Training equipment and materials procurement cost (¥1.7 billion)
Training relocation cost (¥1.3 billion)
)


Aircraft Shelter

○ Facilities Improvement Program (FIP) (aircraft shelters, maintenance hangars, etc.) (¥41.8 billion)

○ Payment of Employer Contributions for USFJ Local Employees' Social Insurance Premiums such as Healthcare Insurance and Pension Insurance (¥25.4 billion)

(3) Rents for Facilities, Compensation, etc. **¥162.3 billion**

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

6 Strengthening Security Cooperation

➢Japan will actively leverage the SDF's capabilities to further defense cooperation and exchanges including bilateral/multilateral training and exercises and various types of international meetings, for the purpose of strategically promoting multi-faceted and multi-layered security cooperation, based on the vision of "Free and Open Indo-Pacific"

【Japan-U.S. Bilateral Exercises】

○ Conducting Japan-U.S. Joint Bilateral Exercise (command post exercise)
Training related to the Japan-U.S. combined response and joint operations of the SDF for the defense of Japan

○ Conducting Exercises on Ballistic Missiles Response, etc.
Training concerning the ballistic missile response and the Japan-U.S. combined response in air defense combat


Command post activities (conceptual image)

【Enhancement of Capability to Conduct Overseas Activities】

○ Bilateral and Multilateral Training/Exercises

• Participation in Large-Scale Global Exercise led by the United States
Vessels, aircraft, etc. will participate in the Large-Scale Global Exercise 2023 (LSGE23) led by the United States to enhance the tactical skills of the SDF and strengthen collaboration with participating countries


Surface live-fire exercises


Cross deck by Japan and the U.S.


Maritime operational exercises

• Field training (field exercise) among the U.S. and Australian militaries in Australia
Conducting a trilateral exercise with among Japan, the U.S., and Australia with the aim of enhancing the tactical skills, etc. of personnel and units, strengthening the collaboration amongst the three countries of Japan, the U.S., and Australia, and contributing to peace and stability in the Indo-Pacific region


Field exercise with the U.S. and Australian militaries in Australia

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

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

【Promotion of Defense Cooperation and Exchanges】


IPD

○ Indo-Pacific Deployment 2023 (IPD2023)
Conducting bilateral/multilateral exercises with navies from the Indo-Pacific region and others to improve tactical skills of the JMSDF and promote cooperation with these navies, as well as contribute to regional peace and stability and enhance mutual understanding and trust.


Multilateral HA/DR Exercise in Micronesia etc.

○ Multilateral HA/DR Exercise in Micronesia, etc.
Enhancing HA/DR capabilities by conducting exercise in which aircraft of participating countries drop donated goods to the waters of Micronesia.


Field training exercise with Indian Army in India

○ Field Training Exercise with Indian Army in India
Conducting bilateral exercise with the Indian Army, which has actual combat experience in the field of counter-terrorism, to improve tactical skills.


Capacity building of the PKO (facilities) field (Cambodia)

○ Promoting Capacity Building
Promote capacity building and personnel training in the Indo-Pacific and other regions in areas such as humanitarian assistance/disaster relief, PKO, maritime security, medical, and cyber security.


Capacity building of the medical field (Fiji)


ADMM-Plus

○ Initiatives under the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus)
The Ministry of Defense and the SDF contribute to proactively promoting the enhancement of defense and security cooperation in the region by co-chairing the ADMM-Plus, for example, making a contribution by serving as the Co-Chair of the Experts' Working Group on Peacekeeping Operations in its fourth cycle together with Vietnam

III Common Infrastructure

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

○ Participation in Pacific Partnership 2023
By visiting countries in the Indo-Pacific region to provide medical services and conduct cultural exchanges, the Pacific Partnership strengthens relationships among participating countries and facilitates international peace cooperation activities through cooperation with governments, militaries, and other organizations.

【International Cooperation with UN and Partners in Areas of Strength】

○ Dispatch of Instructors to PKO Centers in Africa and Other Regions
Dispatch SDF personnel as instructors to provide lectures for UN peacekeeper candidates, upon requests from PKO centers in Africa, in order to strengthen the capability of PKO centers for peace and stability of the region


Dispatch of instructors to PKO centers in Africa

○ Strengthen the Capacity of the Djibouti Armed Forces for Disaster Response
Provide trainings on heavy machinery operation upon requests from the Government of Djibouti
Promote mutual understanding and strengthening the relationship between the defense authorities in Japan and the Republic of Djibouti and contribute to the development and peace of Africa

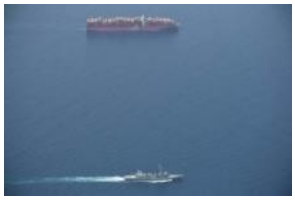

Instruction on the maintenance of engineering equipment for the Djibouti Armed Forces

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


UNTPP, heavy engineering equipment training

【Ensuring Maritime Security】

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


Destroyer escorting vessels

【Efforts to Ensure the Safety of Japan-Related Vessels】

○ Information Gathering Activities in the Middle East
A destroyer and two P-3Cs involved in counter-piracy operations concurrently conduct information gathering activities in three waters of high seas: the Gulf of Oman, the northern Arabian Sea and the Gulf of Aden to the east of the Bab el-Mandeb Strait

7 Initiatives to Combat Climate Change

- It is important to maintain and enhance both climate change measures and defense capabilities at the same time to ensure that the MOD and the SDF can fulfill the duties and roles assigned to them under any environment forecasted due to climate change.
- For achievement of the government's target to reduce greenhouse gas emissions by 50% by FY2030, it is necessary to steadily promote the measures raised in the "National Government Action Plan"* in order to reduce total emissions of greenhouse gases from the MOD (excluding defense equipment).

*National Government Action Plan (October 22, 2021 Cabinet Approval)

○ Reinforcement of Bases and Other Facilities, and Infrastructure

(¥1.5 billion)

Enhance resiliency of infrastructure of facilities such as bases, etc. against disasters, etc. caused by climate change.

- Disaster prevention measures for bases (measures against inundation)

Towing vehicle for aircraft (electric)

○ Improvement on Defense Capabilities and Enhancement on Resilience of Defense Equipment

Respond to new energy source configurations on the future decarbonized society (¥1.7 billion).

- Acquisition of towing vehicles for aircraft (electric)
- Research on hybrid systems

○ Reinforcement of Strategic Security Cooperation (¥1.1 billion)

Promote exchanges and cooperation with other countries on the theme of climate change and conduct joint training, etc. for HA/DR, etc.

- Implementation of international peace cooperation exercises

○ Improvement of Living and Working Environments of SDF Personnel and Reinforcement of Medical Functions (¥5.5 billion)

Respond to increased health risks for SDF personnel due to heat waves and extremely high temperatures.

- Installation of air ventilators for barracks, etc.

○ Improvement of Efficiency and Reduction of Greenhouse Gas Emissions at Bases and Other Facilities (¥15.8 billion)

Strengthen resilience and reduce greenhouse gas emissions by saving energy of facilities, etc.

- Shift to LED lighting system
- Upgrade to hybrid vehicles, etc.

8 Streamlining Initiatives

Make efforts to reduce approx. ¥257.2 billion by optimizing procurement of SDF equipment and others through implementing the following measures, in accordance with the National Defense Strategy and Defense Buildup Program.

(1) Suspension and Elimination of Use [expected reduction: ¥5.2 billion]
Suspend and eliminate the use of equipment whose importance has decreased due to them becoming outdated, etc.
(Main Programs)
・Elimination of GSDF 203mm self-propelled howitzer, etc. [expected reduction: ¥5.2 billion]

(2) Planned, Stable and Efficient Procurement [expected reduction: ¥145.6 billion]
Achieve cost reduction through application of long-term contracts and other methods, improving the predictability of companies and promoting efficient production. In addition, expand comprehensive contracts, including Performance Based Logistics (PBL) where outcomes are acquired through performance-based arrangements that will deliver SDF's requirements in maintenance.
(Main Programs)
・Bulk-purchase through long-term contracts
Procurement of MSDF VLS MK41 to be equipped on destroyers (expected reduction: ¥35.7 billion), ASDF rescue helicopters (UH-60J) (expected reduction: ¥13.6 billion), and engine components to be equipped on GSDF utility/attack helicopters (expected reduction: ¥23.5 billion)
・Bulk/Joint-purchase through methods other than long-term contracts
Procurement of aircraft components such as ASDF C-2 (expected reduction: ¥6.6 billion), comprehensive contract for maintaining ASDF ground communication electronic device (TPS-102A) [expected reduction: ¥4.4 billion], and procurement of MSDF unmanned underwater mine-search vehicle (OZZ-5) (expected reduction: ¥2.3 billion)
・Utilization of PBL
Maintenance of MSDF minesweeper/transport helicopters (MCH-101) (expected reduction: ¥4.8 billion), GSDF transport helicopters (CH-47J/JA) (expected reduction: ¥1.2 billion), and gas-turbine engines for MSDF vessels (expected reduction: ¥1 billion)

(3) Narrowing down SDF-unique specifications (expected reduction: ¥21.4 billion)
Shorten procurement timeline while also reduce equipment life-cycle by narrowing down SDF-unique specifications through modularization, communization, and use of commercial-off-the-shelf products
(Main Programs)
Digitalization of MSDF training and education equipment/materials (expected reduction: ¥7.8 billion), procurement of replacement for ASDF F-15 operation support equipment (expected reduction: ¥2.5 billion)

(4) Program Review (expected reduction: ¥84.9 billion)
Review programs with low cost-benefit performance, while also promoting thorough cost management for each programs and expansion of using outside labor force such as private-sector contractors.
(Main Programs)
・Thorough cost management
Selection of GSDF future wheeled armed vehicles (expected reduction: ¥7.2 billion), restoring reliability of GSDF missiles (expected reduction: ¥5 billion)

(5) Optimizing Organizational Capacity
Transfer necessary SDF personnel for strengthening the SDF Cyber Defense Units (+144 personnel) and the Joint Staff (+8 personnel) from each of the SDF services.
Transfer GSDF personnel to MSDF to meet the increase of required personnel by MSDF (+140 personnel)

9 Number of SDF Personnel

(Unit: person)

Changes in the number of SDF personnel	End of FY2022	End of FY2023	Change
GSDF	158,481	158,226	△255
Regular Personnel	150,500	150,245	△255
Ready Reserve Personnel	7,981	7,981	0
MSDF	45,293	45,414	121
ASDF	46,994	46,976	△18
Joint units	1,588	1,732	144
JS	386	394	8
Defense Intelligence HQ	1,936	1,936	0
Internal Bureau	50	50	0
ATLA	407	407	0
Total	247,154	247,154	0
	(255,135)	(255,135)	(0)

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

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

Number of candidates for reserve personnel	GSDF	MSDF	Total
SDF reserve candidates	4,600	21	4,621

10 Actual Number of SDF Personnel

Increase in the Actual Number of SDF Personnel	GSDF	MSDF	ASDF	Total
Request for increase	+1,222	+300	+247	+1,769

* Of the above, 152 personnel will be transferred to the Joint Staff, etc.
Note: Joint Staff, etc. refers to the Joint Staff, joint units, DIH, Internal Bureau, and ATLA.

<Reference: Changes in the actual number of SDF personnel in the last five years>

	FY2018	FY2019	FY2020	FY2021	FY2022
Approved	+700	+664	+641	+710	+1,014

Number of SDF personnel (annual average)	GSDF	MSDF	ASDF
Annual average	140,963	43,526	44,553

11 Increase in the Number of Civilian Officials and Others, etc.

(1) Requests for Increase in the Number of Civilian Officials and Others

In order to secure the systems for the "strengthening of security" stated in the decision by the Prime Minister which directs personnel expenses and organization and staff change request (Directive for organization and allocation of personnel expense in FY2023 to proceed with the core issue of the Cabinet [July 29, 2022]), secure increase in the number of civilian officials and others necessary for fundamentally strengthening Japan's defense capability (net increase of 75 staff).

○ Strengthen Cross-Domain Operation Capabilities and Systems Pertaining to Sustainability and Resiliency (126 personnel)
- Strengthen the planning functions of cybersecurity policy to respond to the threat of increasingly diverse and sophisticated cyber attacks and strengthen the implementation system for risk analysis, assessment and auditing, etc. arising from the introduction of stricter security standards.
- Strengthen the systems pertaining to the maintenance, development, and supply of equipment, etc. and the enhancement of the resiliency, etc. of SDF facilities.

○ Strengthen Structure for Reinforcement of the Defense Production/Technological Base, including R&D of Advanced Technologies (58 personnel).
- Strengthen posture to smoothly promote the development of stand-off missiles and GCAP, etc.

○ Strengthen the Japan-U.S. Alliance, Enhance Security Cooperation (54 personnel)
- Promote projects for the return of land areas south of Kadena Air Base, including the Naha Port, and to promote projects to develop Field-Carrier Landing Practice (FCLP) facilities.

○ Reinforce Human Resource Infrastructure (30 personnel)
- Strengthen the educational functions for securing cyber workforce and enhancing its quality

○ Increase the Number of civilian officials and others to Fundamentally Strengthen Japan's Defense Capability (38 personnel) .
- Strengthen intelligence collection and analysis capability of Defense Intelligence Headquarters, etc. concerning the international military situation, etc.

○ Increase the number of civilian officials and others who contribute to economic security (26 personnel)

○ number of civilian officials and others to promote work-life balance (23 personnel)

<Changes in the Number of Civilian Officials and Others > (Unit: person)

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2022
	13th rationalization plan		14th rationalization plan			
Increase	209	204	299	290	330	355
Rationalization	△261	△261	△266	△266	△267	△267
Decrease due to the arrival of temporary post's deadline, etc.	△15	△12	△12	△21	△19	△13
Net increase and decrease	△67	△69	21	3	44	75
Number at the end of FY	20,931	20,903	20,924	20,927	20,971	21,041

Note 1: Other than the above, rationalization of organizational quota by operational reform and personnel transfer would take place from FY2020 to FY2023 budget requests (FY2020: 160 personnel, FY2021: 301 personnel, FY2022: 126 personnel, FY2023: 226 personnel)
Note 2: 5 personnel to be transferred to the Ministry of Foreign Affairs (Embassy in UK) for developing the next-generation fighter aircraft are included in Number at the end of FY but are not included in decrease due to the arrival of temporary post's deadline
Note 3: Quota for promoting employment of persons with disabilities (FY2018: 24 officials, FY2019: 41 officials) is included in Number at the end of FY but is not included in the increase
Note 4: The Minister, State Minister, two Parliamentary Vice-Ministers, or Senior Advisor to the Minister are not included in Number at the end of FY

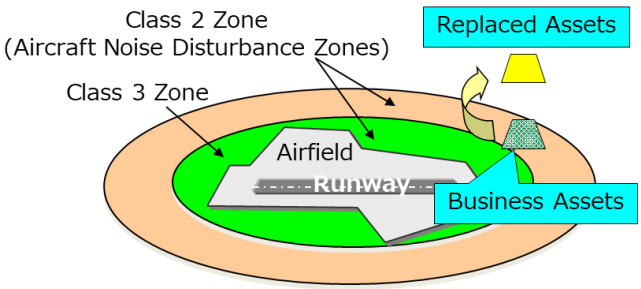
(2) Others

○ Strengthen policy planning functions, including newly establishing the "Operational Infrastructure Division (Tentative Name)" and the "Bureau of Defense Policy Councilor" in the Bureau of Defense Policy, to enable a more efficient and effective response to various security issues.

12 Tax System Reform

○ Extension of Special Measures such as Making a Replacement Purchase of Business Assets
Related to Countermeasures Against Aircraft Noise (Measures Related to Relocations)
(Income Tax / Corporation Tax)

・A three-year extension of special measures for taxation on capital gains in case of transferring business assets located inside the aircraft noise disturbance zones around defense facilities to the government and making a replacement purchase of those assets to locate outside the aircraft noise disturbance zones.



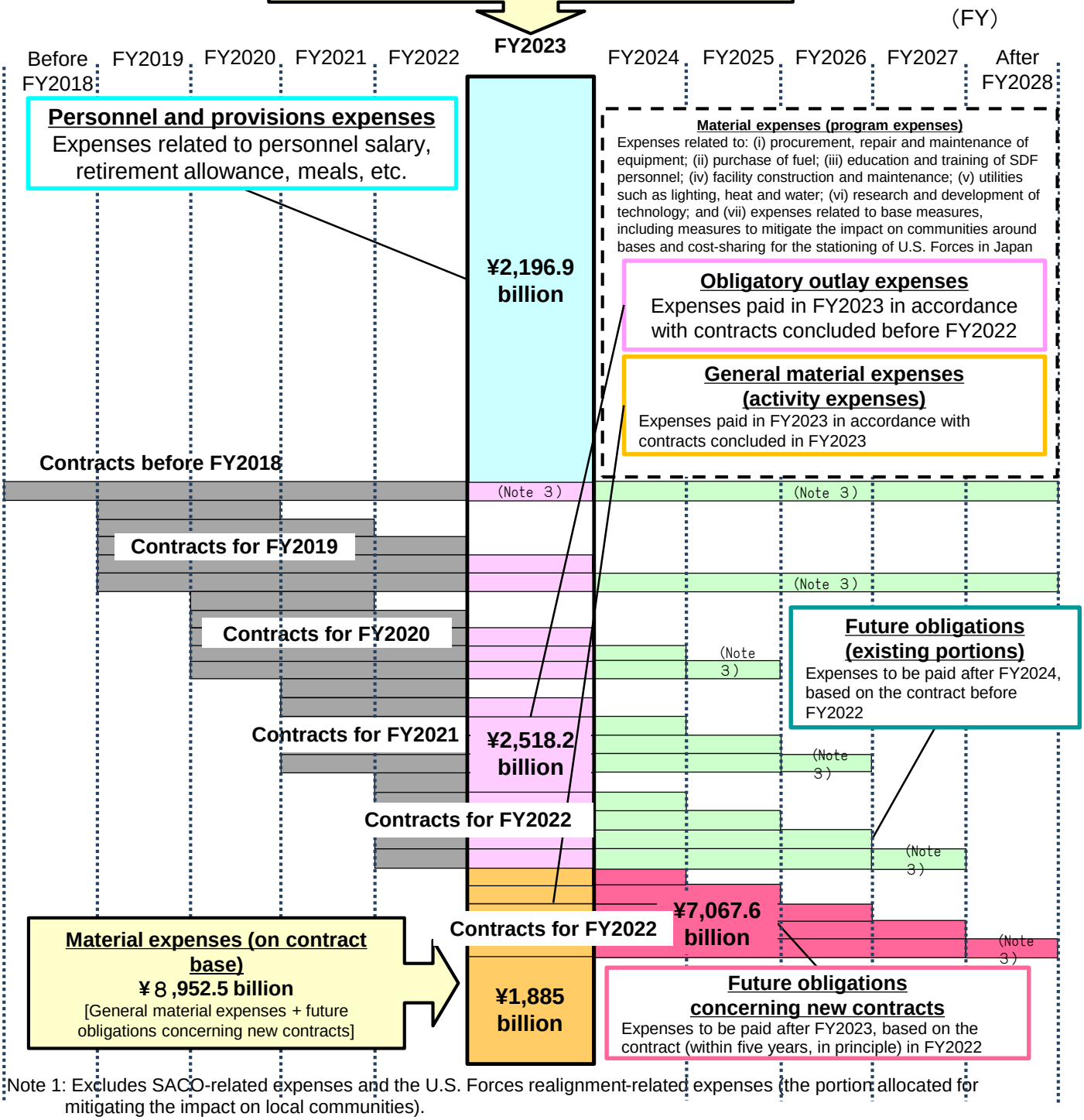
Replacement Purchase of Business Assets
(Conceptual Image)

○ Extension of Special Deduction for Corporation Tax, etc., in the case of research and development (Corporation Tax, etc.)
(Joint requests : Ministry of Economy, Trade and Industry(METI), Cabinet Office(CAO), Ministry of Internal Affairs and Communications(MIC), Ministry of Education, Culture, Sports, Science and Technology(MEXT), Ministry of Agriculture, Forestry and Fisheries(MAFF), Ministry of Health, Labour and Welfare (MHLW), Ministry of Land, Infrastructure, Transport and Tourism(MLIT), Ministry of the Environment(MOE) and Reconstruction Agency)

・ A three-year extension of extra measures for extending creditable amount of Corporate Tax, etc., in order to provide incentive to research and development investment effectively.

Reference

Expenditures: ¥ 6,600.1billion
[Personnel and provisions expenses + obligatory outlay expenses + general material expenses]



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

(Expenditure base)
- **Total amount to be paid in the current fiscal year for projects like procurement of equipment and facility development**

(Contract base)
- **Total amount of contracts concluded in the current fiscal year for projects like procurement of equipment and facility development**

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

※Contract period of main projects

destroyer：4～5 years	guided missile：about 4 years	sustainment and maintenance：1～2 years
aircraft：3～5 years	ammunition：2～3 years	facility：2～3 years

Breakdown by organization （on expenditure base）

(Unit: ¥100 million)

Category	FY2022 annual budget	FY2023 annual budget	Comparison with the previous year
Defense-related expenses	５１，７８８	６６，００１	１４，２１３
Ministry of Defense	４９，５９９	６２，３４２	１２，７４４
GSDF	１７，５３３	１９，１２０	１，５８６
MSDF	１２，９２２	１６，４６７	３，５４５
ASDF	１１，６７２	１８，６１３	６，９４１
Total	４２，１２７	５４，２００	１２，０７３
Internal Bureau	５，２４７	５，７４５	４９７
Joint Staff	９８３	８２４	△１５９
Defense Intelligence HQ	７８６	１，０５３	２６７
National Defense Academy	１７６	２０９	３３
National Defense Medical College	２４１	２７０	２９
NIDS	３１	３２	１
Inspector General's Office of Legal Compliance	８	１０	２
Total	７，４７１	８，１４２	６７１
（Regional Defense Bureau）	２１７	２３８	２１
（ATLA）	１，９７３	３，４２２	１，４４９

Note 1: Excludes SACO-related expenses and the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: The FY2022 budget includes ¥31.8 billion and the FY2023 budget includes ¥33.9 billion appropriated by the Digital Agency

Breakdown by organization（on contract base）

(Unit: ¥100 million)

Category	FY2022 annual budget	FY2023 annual budget	Comparison with the previous year
Defense-related expenses	３４，９８０	８９，５２５	５４，５４６
Ministry of Defense	３１，７６４	７８，５７２	４６，８０７
GSDF	５，３７６	１６，８８０	１１，５０４
MSDF	９，９９７	２６，６５４	１６，６５７
ASDF	９，９２８	２４，５６１	１４，６３４
Total	２５，３０１	６８，０９５	４２，７９５
Internal Bureau	５，１２７	７，９１７	２，７９１
Joint Staff	５１２	９７３	４６１
Defense Intelligence HQ	５９３	１，１６８	５７５
National Defense Academy	８７	２０５	１１８
National Defense Medical College	１２４	１７６	５１
NIDS	１８	２４	６
Inspector General's Office of Legal Compliance	４	１３	９
Total	６，４６４	１０，４７６	４，０１２
(Regional Defense Bureau)	４２	７８	３６
(ATLA)	３，１７３	１０，８７６	７，７０３

Note 1: Excludes SACO-related expenses and the U.S. Forces realignment-related expenses (the portion allocated for mitigating the impact on local communities).
Note 2: The FY2023 budget includes ¥30.8 billion and the FY2024 budget includes ¥49.1 billion appropriated by the Digital Agency

Promotion of Base-Related Measures, etc.

(Unit: ¥100 million, %)

Category	FY2022 annual budget	FY2023 annual budget	Comparison with the previous year	Growth rate from previous year
Promotion of base-related measures, etc.	< 4,888 > 4,718	< 5,122 > 4,872	< 234 > 154	< 4.8 > 3.3
(1) Expenses related to measures for communities around bases	< 1,183 > 1,186	< 1,267 > 1,218	< 84 > 33	< 7.1 > 2.8
Residential soundproofing	< 514 > 523	< 547 > 511	< 33 > △ 13	< 6.5 > △ 2.4
Improving living environment of areas around defense facilities	< 670 > 662	< 720 > 708	< 50 > 45	< 7.5 > 6.9
(2) Host Nation Support (Cost sharing for the stationing of U.S. Forces in Japan)	< 2,167 > 2,056	< 2,232 > 2,112	< 66 > 56	< 3.0 > 2.7
Special Measures Agreement	1,537	1,560	23	1.5
Labor cost	1,281	1,296	14	1.1
Utilities cost	234	234	-	-
Training equipment and materials procurement cost	10	17	6	61.9
Training relocation cost	11	13	2	21.1
Facilities Improvement Program	< 378 > 267	< 418 > 298	< 40 > 30	< 10.7 > 11.4
Measures for USFJ local employees	252	254	2	0.8
(3) Rents for facilities, compensation, etc.	< 1,537 > 1,476	< 1,623 > 1,542	< 85 > 66	< 5.5 > 4.5

Note 1: The above figures are on expenditure base (general material expenses + obligatory outlay expenses), and the figures in < > are on contract base (hereafter the same).
Note 2: The FY2023 annual budget includes ¥40 million (expenditure base) and ¥30 million (contract base) appropriated by the Digital Agency.

Special Action Committee on Okinawa (SACO)-Related Expenses

(Unit: ¥100 million, %)

Category	FY2022 annual budget	FY2023 annual budget	Comparison with the previous year	Growth rate from the previous year
1 Project for land return	3	4	1	26.2
2 Project for training improvement	16	14	△ 1	△ 7.9
3 Project for smooth implementation of SACO initiatives	< 126 > 118	< 134 > 97	< 8 > △ 22	< 6.6 > △ 18.2
Total	< 144 > 137	< 152 > 115	< 8 > △ 22	< 5.5 > △ 16.0

U.S. Forces Realignment-Related Expenses
(the portion allocated for mitigating the impact on local communities)

(Unit: ¥100 million, %)

Category	FY2022 annual budget	FY2023 annual budget	Comparison with the previous year	Growth rate from the previous year
1 Project for relocation of the U.S. Marine Corps stationed in Okinawa to Guam	185	9	△ 176	△ 95.4
2 Project for realignment in Okinawa	<1,692> 762	<2,520> 1,035	<828> 273	<48.9> 35.9
(1) Relocation of MCAS Futenma	<1,030> 355	<1,912> 651	<883> 296	<85.7> 83.4
(2) Return of land areas south of Kadena Air Base	<662> 406	<607> 383	<△ 55> △ 23	<△ 8.3> △ 5.7
3 Project for relocation of the carrier-based aircraft	<3,183> 549	<3,030> 546	<△ 153> △ 3	<△ 4.8> △ 0.5
4 Project for contingency use	<0> 67	<42> 8	<42> △ 59	<210x> △ 87.7
5 Project for training relocation	93	89	△ 3	△ 3.8
6 Project for smooth implementation of realignment-related measures	<438> 425	<401> 416	<△ 37> △ 9	<△ 8.5> △ 2.2
(1) Realignment Grants	41	55	14	32.9
(2) Measures for areas around bases, etc.	<396> 384	<346> 361	<△ 51> △ 23	<△ 12.8> △ 6.0
Total	<5,590> 2,080	<6,090> 2,103	<500> 23	<8.9> 1.1

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