established in order to strengthen the defense capacities build-up function

c. The New Establishment of the Acquisition, Technology and Logistics Agency

- The ATLA has been established as an extra-ministerial organization with the following four objectives, by bringing together and consolidating the departments of the MOD that had been related to the procurement, research and development of equipment (the Internal Bureaus, the respective Staff Offices, the Technical Research and Development Institute, and the Equipment Procurement and Construction Office)

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**Effective Deterrence and Response**

In order to respond to a variety of contingencies in a timely and appropriate manner, and to assure the protection of the lives and property of the people as well as territorial land, water and airspace, it is necessary to make efforts to deter the occurrence of a variety of contingencies before they happen by building a comprehensive defense architecture. If a contingency does occur, it is required to respond seamlessly to the situations as they unfold.

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### Ensuring Security of Sea and Airspace Surrounding Japan

Japan is comprised of a little over 6,800 islands, and is surrounded by wide sea space, which includes the sixth largest\(^4\) Exclusive Economic Zone (EEZ) in the world. The SDF is engaged in persistent intelligence collection and warning and surveillance during peacetime over Japan’s territorial waters and airspace, as well as the surrounding sea and airspace.

#### Warning and Surveillance in Waters and Airspace Surrounding Japan

**1. Basic Concept**

The SDF persistently engages in warning and surveillance activities in the waters and airspace surrounding Japan during peacetime so that it can respond to various contingencies immediately and seamlessly.

**2. Response by the MOD/SDF**

The MSDF patrols the waters surrounding Hokkaido, the Sea of Japan, and the East China Sea from peacetime, using P-3C patrol aircraft and other aircraft. The ASDF uses radar sites at 28 locations nationwide, and early warning and control aircraft amongst others, to carry out warning and surveillance activities over Japan and its surrounding airspace 24 hours a day. Warning and surveillance activities in major channels are also conducted 24 hours a day by MSDF guard posts, GSDF coastal surveillance units, and other assets. Furthermore, warning and surveillance activities are carried out with

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1. To have an advantage over the opponent in terms of quickly and correctly identifying, collecting, processing, and conveying information.

2. Maritime superiority refers to the condition in which one side has a tactical advantage over the opposing force at sea and can carry out maritime operations without suffering substantial damages by the opposing force.

3. Air superiority refers to the condition in which one side can carry out airborne operations without suffering a significant level of obstruction by the opposing force.

4. Excluding overseas territories. The EEZ is the eighth largest in the world if overseas territories are included.
Chapter 1

Organizations Responsible for the Defense of Japan, and Effective Deterrence and Handling

Since December 26, 2015, Chinese government vessels equipped with weapons, which appear to be machine guns, have intruded into the territorial waters of Japan. Such intrusions into Japan’s territorial waters surrounding the Senkaku Islands have carried out intermittent incidents of activities by Chinese Navy vessels including passage through the Southwestern Islands such as the sea areas between the main island of Okinawa and Miyako Island. Furthermore, in June 2016, a Chinese Navy combatant vessel entered Japan’s contiguous zone to the north of the Senkaku Islands for the first time. In the same month, a Chinese Navy intelligence gathering vessel (AGI) sailed within Japan’s territorial waters west of Okinotorishima Island. This AGI later left the Japan’s territorial waters southwest of Matsumae-kojima Island in Matsumae, Hokkaido. This AGI later left the territorial waters and sailed east through Tsugaru Strait, advancing to the Pacific Ocean.

“Liaoning” passed through the sea area between the main island of Okinawa and Miyako Island, and entered the western Pacific in December 2016. This was the first time that the entry of this aircraft carrier into the Pacific Ocean was confirmed. In July 2017, a Chinese Navy AGI entered Japan’s territorial waters southwest of Matsumae-kojima island in Matsumae, Hokkaido. This AGI later left the territorial waters and sailed east through Tsugaru Strait, advancing to the Pacific Ocean.

Since it is anticipated that the areas of activity by Chinese government vessels and Navy vessels will continue to further expand and their activities will become more

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5 Since December 26, 2015, Chinese government vessels equipped with weapons, which appear to be machine guns, have intruded into the territorial waters of Japan.
active, Japan needs to follow their moves more closely. Due to such circumstances, the MOD/SDF is working to strengthen the collaboration with relevant government ministries and agencies, for example by routinely sharing information obtained through warning and surveillance activities with the Japan Coast Guard from peacetime.

Fig. III-1-2-1 (Conceptual Image of Warning and Surveillance of the Sea Areas and Airspace Surrounding Japan); Fig. III-1-2-2 (Number of Incursions into the Territorial Waters around the Senkaku Islands by Chinese Coast Guard Ships)

2 Warnings and Emergency Takeoffs (Scrambles) in Preparation against Intrusion of Territorial Airspace

(1) Basic Concept
Under international law, countries have complete and exclusive sovereignty over their airspace. Scrambling against aircraft intruding into territorial airspace is conducted as an act to exercise the right of policing intended to maintain public order. Unlike measures taken on land or at sea, this measure can be taken only by the SDF. Therefore, the ASDF is primarily responsible for conducting the actions based on Article 84 of the SDF Law.

Under international law, countries have complete and exclusive sovereignty over their airspace. Anti-intrusion measures are conducted as an act to exercise the right of policing intended to maintain public order. Unlike measures taken on land or at sea, this measure can be taken only by the SDF. Therefore, the ASDF is primarily responsible for conducting the actions based on Article 84 of the SDF Law.

(2) Response by the MOD/SDF
The ASDF detects and identifies aircraft flying in airspace surrounding Japan using warning and control radars as well as early-warning and control aircraft. If any suspicious aircraft heading to Japan’s territorial airspace are detected, fighters and other aircraft scramble.

Under international law, countries have complete and exclusive sovereignty over their airspace. Anti-intrusion measures are conducted as an act to exercise the right of policing intended to maintain public order. Unlike measures taken on land or at sea, this measure can be taken only by the SDF. Therefore, the ASDF is primarily responsible for conducting the actions based on Article 84 of the SDF Law.

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to approach them in order to confirm the situation and monitor the aircraft as necessary. Furthermore, in the event that this suspicious aircraft has actually intruded into territorial airspace, a warning to leave the airspace would be issued, among other responses.

In September 2016, aircraft of the Chinese People’s Liberation Army (PLA), assumed to be fighter aircraft, flew over and passed through the main island of Okinawa and Miyako Island for the first time. In November 2016, four aircraft including Chinese military bombers flew from the Pacific Ocean and passed through the main island of Okinawa and Miyako Island. At the same time, it was confirmed that two fighter aircraft also joined these four aircraft. In December of the same year, six Chinese
military aircraft including two fighter aircraft flew passed the main island of Okinawa and Miyako Island. In January 2017, a total of eight Chinese military aircraft including six bombers flew past the Tsushima Strait, and carried out a round-trip flight between the East China Sea and the Sea of Japan. In March 2017, a total of 13 aircraft including Chinese military aircraft, presumably fighter aircraft, flew past the main island of Okinawa and Miyako Island, and then returned. Furthermore, in May 2017, from a Chinese government vessel that entered Japan’s territorial waters near the Senkaku Islands, an object that appears to be a drone flew in and intruded into Japanese airspace. With respect to the Russian Armed Forces (RAF), there have also been unusual cases, such as two Russian bombers carrying out a long distance flight in the area surrounding Japan in January 2017.

**Column Commentary**

**Record High Emergency Takeoffs (Scrambles) against Chinese Aircraft and the ASDF’s Responses to the Situation**

Since 1958, the ASDF has taken every possible measure to prevent intrusion of territorial space by scrambling its fighter aircraft to approach any suspicious aircraft heading towards Japan’s territorial airspace. In FY2016, ASDF fighter aircraft scrambled 1,168 times, which broke the previous record of 944 times in 1984 and was the most in the past 60 years. In FY1984 the Northern Air Defense Force scrambled most often (439 times), while in FY2016 it was the Southwestern Composite Air Division that scrambled most often (803 times), indicating that the security environment in the southwestern direction has become increasingly severe.

The increasing number of scrambles is due to the expansion and intensification of activities of Chinese military aircraft. In the airspace around Japan, along with the increase in the number of active Chinese military aircraft, Chinese military aircraft recently has had a tendency to gradually expand their area of activity in the East China Sea in the eastward and southward directions. As a result of this progressive expansion, the number of activities of Chinese military aircraft confirmed in the airspace close to the main island of Okinawa and the Southwestern Islands has been increasing further. This has led to the increase in the number of scrambles by ASDF fighter aircraft.

Along with the expansion and intensification of the activities of Chinese military aircraft, the number of scrambles conducted by the Southwestern Composite Air Division in FY2016 accounted for more than 60% of the scrambles conducted nationwide. In order to further enhance the airspace defense mechanisms in the southwestern region, the Southwestern Composite Air Division was reorganized into the Southwestern Air Defense Force on July 1, 2017. The new organization will continue to play the core role in the airspace defense in the southwestern region and conduct strict air defense missions including scrambles against aircraft intruding into Japan’s territorial airspace at all hours.

**Column Voice**

**Captain (ASDF) Hitoshi Senaga, Member of Aviation, 304th Squadron, 9th Air Wing Group (Naha City, Okinawa Prefecture)**

The 9th Air Wing, located at the ASDF Naha Air Base, is the only fighter aircraft (F-15) unit in the southwestern region, and its aircraft scrambled over 800 times in FY2016, such that scrambles were carried out almost daily. In addition, the 9th Air Wing performs most of the scrambles against Chinese aircraft, and we, the fighter aircraft pilots, are on Combat Air Patrol (CAP) 24 hours a day all year round. What I always keep in mind when scrambling to the scene to respond to Chinese aircraft is to maintain a firm attitude that demonstrates intention to maintain airspace territorial integrity, as well as take careful and strict actions in accordance with laws and regulations, and remain calm to be able to respond appropriately to any situations while bracing myself for the duty. In an increasingly severe security environment in the southwestern region, I perform my duty as always, keeping in mind that each and every action we take in the course of our duties may potentially lead to a critical interstate situation. The sense of relief I feel when I complete a duty and land home safely is only temporary, as I must promptly start preparing for the next scramble. When I think about the current situation in the airspace over the beautiful sea (Churaumi) where I was born and grew up, I get emotional and a strong sense of mission emerges within me. In this southwestern region, which will face severer situations going forward, I am committed to working towards my duties with even more strict and resolute attitude, and contribute to the peace and security of Japan.

Captain (ASDF) Hitoshi Senaga, Member of Aviation, 304th Squadron, 9th Air Wing Group (Naha City, Okinawa Prefecture)
As these cases indicate, the PLA and the RAF have become more active in the areas surrounding Japan. In response to these incidents, the ASDF has scrambled its fighters. In FY2016, ASDF aircraft scrambled 1,168 times, which was an increase by 295 times compared with the previous fiscal year and the most number of times since 1958 when scrambles commenced. Among these, the number of scrambles against Chinese aircraft was 851 times, which was an increase by 280 times compared with the previous fiscal year, and set a record high.

Even after the establishment of the “East China Sea Air Defense Identification Zone” by China in November 2013, the MOD/SDF has implemented warning and surveillance activities as before in the East China Sea, including the zone in question, and has continued to take all initiatives necessary to engage in warning and surveillance in both the sea and airspace around Japan. The MOD/SDF also engages in strict airspace anti-intrusion measures in accordance with international law and the SDF Law.

(2) Response by the MOD/SDF
The MSDF is maintaining and enhancing capabilities for: expressing its intention not to permit any navigation that violates international law; and responding in shallow water areas by detecting, identifying, and tracking foreign submarines navigating under the territorial waters of Japan. In November 2004, the MSDF observed a submerged Chinese nuclear-powered submarine navigating under Japanese territorial waters around the Sakishima Islands. In response to this incident, the MSDF issued an order for maritime security operations, and MSDF vessels and aircraft continued to track the submarine until it entered the high seas.

Afterwards, in May 2013, March 2014, and February 2016, although there was no confirmed intrusion into the territorial waters of Japan, the MSDF P-3C, etc. observed submarines navigating underwater in the contiguous water zone. Although international law does not forbid foreign submarines navigating underwater in the contiguous zone of coastal states, Japan maintains a posture to appropriately deal with such activities.

Response to Submarines Submerged in Japan’s Territorial Waters

(1) Basic Concept
With respect to foreign submarines navigating underwater in Japan’s territorial waters, an order for maritime security operations will be issued. The submarine will be requested to navigate on the surface of the water and show its flag, in accordance with international law, and in the event that the submarine does not comply with the request, the SDF will request it to leave Japanese territorial waters.

(2) Response by the MOD/SDF
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Response to Armed Special Operations Vessels

(1) Basic Concept
The Japan Coast Guard, as a police organization, is primarily responsible for responding to suspicious armed special operations vessels (unidentified vessels). However, in the event that it is deemed extremely difficult or impossible for the Japan Coast Guard to respond to a situation, an order for maritime security operations will be issued and the situation will be handled by the SDF in cooperation with the Japan Coast Guard.

(2) Response by the MOD/SDF
In light of the lessons learned from the cases of an unidentified vessel off the Noto Peninsula in 1999, an unidentified vessel in the sea southwest of Kyushu in 2001, and other similar incidents, the MOD/SDF has strengthened cooperation with other relevant ministries and agencies by conducting joint exercises with the Japan Coast Guard on a regular basis.

In particular, the MSDF has been taking the following steps: (1) deployment of guided-missile patrol boats; (2) establishment of the MSDF Special Boarding Unit;
(3) equipment of destroyers with machine guns; (4) furnishing forcible maritime interdiction equipment (flat-nose shells); (5) improving the sufficiency ratio of military vessel personnel; and (6) enhancing equipment for the Vessel Boarding Inspection Team. Furthermore, based on the “Manual on Joint Strategies concerning Unidentified Vessels” jointly prepared by the then Japan Defense Agency and the Japan Coast Guard in 1999, the MSDF also makes an effort to strengthen cooperation between these two organizations.

2 Defense of Japan’s Remote Islands

1 Basic Concept

Japan has a number of remote islands. In order to respond to attacks on these islands, it is important to position units and so forth in accordance with the security environment, and also to detect signs at an early stage through persistent intelligence, surveillance, and reconnaissance (ISR) conducted by the SDF in peacetime as well as obtaining and securing maritime and air superiority.

If signs of attack are detected in advance, troops will be deployed and concentrated in an area expected to be attacked ahead of the deployment of enemy units, and, through the joint operation involving all the SDF forces (the GSDF, MSDF, and ASDF), deter and remove enemy attacks. If there is an invasion of the islands, the enemy will be brought under control by ground fire from aircraft and vessels, and then tactical operations will be implemented to regain the islands by the landing of SDF forces and other initiatives. Furthermore, a precise response will be taken to attacks using ballistic missiles, cruise missiles and other weapons.

2 Initiatives of the MOD/SDF

For defense posture buildup in the southwestern region, in January 2016, the ASDF relocated one fighter squadron to the Naha Air Base to increase the number of fighter squadrons to two, and established the 9th Air Wing. The

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8 A non-bursting shell launched from the 76-mm gun equipped on destroyer, the flat front nose of which keeps it from bouncing.
ASDF also formed the Southwestern Air Defense Force in July 2017. The GSDF newly formed the Yonaguni coast observation unit and other units on Yonaguni in March of the same year. Going forward, the GSDF will deploy some units including an area security unit in charge of the initial responses in Amami Oshima, Miyako Island, and Ishigaki Island, as well as establishing an “Amphibious Rapid Deployment Brigade (provisional name)” equipped with a full function for amphibious operations. In addition, the MSDF will acquire P-1 fixed wing patrol aircraft, SH-60K rotary wing patrol helicopters, and other equipment. Through these initiatives, the MOD/SDF will continue persistent ISR operations, and develop an immediate response posture in the case of contingencies.

Furthermore, in order to secure capabilities for swift and large-scale transportation and deployment of units, initiatives are underway to enhance rapid deployment capabilities through: the improvement of Osumi class transport LST (Landing Ship, Tank); a review of the role of multipurpose vessels; and the introduction of V-22 Ospreys and C-2 transport aircraft.

In particular, for the operation of V-22 Ospreys, the MOD determined that the KYUSHU-SAGA International AIRPORT was the best airfield to be used as the deployment site for V-22 Ospreys due to positional relationships with relevant units in joint operations, the length of the runway, and the geographic environment that can reduce burdens borne by the local community. The MOD/SDF hopes to gain understanding from the local community through providing in-depth explanations.\(^9\)

In addition, the SDF conducts various training exercises to improve its capability for amphibious operations. For example, the SDF carried out a Japan-U.S. bilateral joint exercise (field exercise) called “Keen...

Shukichi Hokama, Mayor of Yonaguni Town, Okinawa Prefecture

Yonaguni Island is located at the westernmost point of Japan where the sun sets later than any other place in the country. The distance from Tokyo to Yonaguni Island is approximately 1,900 km and from the main island of Okinawa approximately 500 km. Conversely, the island is only approximately 110 km away from Taiwan, and the mountain range in Taiwan can be viewed several times a year from Yonaguni Island.

Living in such a border island, we often actually feel that the security environment is becoming increasingly severe. The people in this town have been wishing for the deployment of the SDF for a considerable length of time. For this reason, since April 1973 when the town council adopted a resolution for the “Request for the SDF Deployment,” we have continued to engage in activities to realize the deployment of the SDF.

In March 2016, the Yonaguni Coast Observation Unit and other relevant units were newly established, and Yonaguni welcomed SDF personnel and their families as residents of the town. Since then, people in the town have actively interacted with each other, the issue of one-room primary schools was resolved through the moving in of the SDF personnel’s children, and the town has become full of energy. When a disaster relief dispatch was carried out in response to water accidents in April 2016, the SDF dealt with the situation in a swift manner. This made me keenly aware that the existence of the SDF close to home would ensure the safety and security of the people of the town.

Yonaguni will celebrate the 70th anniversary of its organization into a town in December 2017. As a mayor of Yonaguni always acting with a sense of responsibility and mission, I will continue to protect the “Border Island, Yonaguni Island” where we can coexist and mutually interact, together with the SDF personnel at the camp in order to maintain the safety and security of the people of Yonaguni.

Establishment of the SDF’s First Full-Scale Amphibious Operations Unit, Amphibious Rapid Deployment Brigade

The amphibious rapid deployment brigade, which will be newly formed at the end of FY2017, is a full-scale amphibious operations unit that belongs to the GSDF for the first time. Its primary duty is to conduct full-fledged amphibious tactics for quick landing, recapturing, and securing in the case of illegal occupation of remote islands. In developing amphibious tactical functions, which the GSDF has not had previously, the GSDF is currently working on various educational and training activities. For example, GSDF personnel undergo rigorous training every day such as the one using an amphibious vehicle (AAV7), and another involving dropping from a helicopter to the sea surface followed by waterway infiltration training utilizing a boat, in addition to learning and acquiring a variety of skills required for activities at sea. The GSDF also actively participates in both domestic and international exercises and make efforts to accumulate relevant know-how, in order to improve cooperation with the MSDF, the ASDF, and the U.S. Forces.

Establishing the amphibious rapid deployment brigade will enhance the SDF’s capabilities for the defense of remote islands and Japan’s deterrence capabilities. In addition, the brigade is expected to conduct a wide range of activities in disaster relief dispatches, including prompt relief activities from the sea.
Strengthening of Transportation Capabilities in Various Operations Accompanying C-2 Transport Aircraft Deployment

C-2 transport aircraft, a successor of C-1 transport aircraft, is a domestically manufactured transport aircraft that began to be developed in 2001. Following its first flight in 2010, the first mass-produced C-2 transport aircraft was delivered to the ASDF in June 2016, and test flights have been conducted at the ASDF Gifu Air Base since then. In March 2017, the first three C-2 transport aircraft were deployed to the ASDF Miho Air Base located in Tottori Prefecture.

In comparison with C-1 transport aircraft, C-2 transport aircraft is capable of loading approximately three times more freight, and its range is extended approximately four times longer. Therefore, it has become possible to load large-sized equipment that could not previously be loaded onto transport aircraft, such as the Patriot system, UH-60J helicopters, amphibious vehicles, mobile combat vehicles and field operation vehicles. The MOD/SDF has promoted the introduction of C-2 transport aircraft primarily to deal with attacks against Japan’s remote islands, considering the severe security environment surrounding the country. At the same time, C-2 transport aircraft is expected to play an active role in disaster response and international peace cooperation operations by utilizing such large-scale and swift transportation capabilities.

Comparison of payload (approx. three times larger than C-1)

Comparison of the range (approx. four times more than C-1)

Sword 17” between October and November 2016, and a Japan-U.S. joint field exercise (Iron Fist) in the United States with the U.S. Marine Corps in February 2017.

Response to Ballistic Missile Attacks

Japan began developing the Ballistic Missile Defense (BMD) system in FY2004 to be fully prepared for the response against ballistic missile attacks. Necessary amendments were subsequently made to the SDF Law in 2005, and in the same year, the Security Council and Cabinet decided to begin Japan-U.S. cooperative development of an advanced ballistic missile interceptor. To date, Japan has steadily built up its own multi-tier defense system against ballistic missile attacks, by such means as installing ballistic missile defense capability to the Aegis-equipped destroyers and deploying the Patriot Advanced Capability-3 (PAC-3). Moreover, in light of the further progress made in North Korea’s overall ballistic missile development, Japan will accelerate its efforts and review for the overall enhancement of its capability to respond to ballistic missiles, while it will continue to conduct studies on the United States’ advanced initiatives and equipment.

Reference 40 (History of Efforts for BMD Development in Japan)

10 Keen Sword 17 is the largest bilateral joint exercise between Japan and the United States. In FY2016, it was conducted for approximately two weeks from October 30 to November 11 in waters and airspace surrounding Japan, at the SDF bases and U.S. military bases in Japan, and in Guam and the Northern Mariana Islands. Approximately 25,000 personnel from the GSDF, MSDF and ASDF, approximately 20 vessels, and approximately 260 aircraft participated in this exercise. They practiced the SDF’s joint operation including defense of Japan’s remote islands and the Japan-U.S. Joint Response in armed attack situations, and conducted various exercises aimed at the maintenance and enhancement of their capabilities.

11 The Patriot PAC-3 system is one of the air defense systems for countering airborne threats. Unlike the conventional type of anti-aircraft PAC-2 missiles, which mainly intercepts aircraft and other targets, the PAC-3 missiles are designed primarily to intercept ballistic missiles.
1 Japan’s Ballistic Missile Defense

(1) Basic Concept
Japan’s BMD is an effective multi-tier defense system with the upper tier interception by Aegis-equipped destroyers and the lower tier by Patriot PAC-3, both interconnected and coordinated by the Japan Aerospace Defense Ground Environment (JADGE).\(^\text{12}\)

In case ballistic missiles or other objects\(^\text{13}\) are launched against Japan as an armed attack, it will be dealt with by issuing a defense operation order for armed attack situations. On the other hand, if ballistic missiles are launched towards Japan, and the situation is not acknowledged as an armed attack, the Minister of Defense can order the SDF units to take measures to destroy the ballistic missiles with sufficient consideration taken to carrying out prompt and appropriate response and ensuring civilian control.

As a response against ballistic missiles or other objects, the Joint Task Force-BMD is formed, with the Commander of the Air Defense Command serving as its Commander, and various postures for effective defense are to be taken under a unified command through JADGE. Furthermore, the GSDF will play a leading role in dealing with damage caused by the impact of a fallen ballistic missile.

(2) Response by the MOD/SDF
Since the beginning of 2016, the threat of North Korean ballistic missiles has risen with ballistic missile launches being conducted at frequencies and of a content not seen before. The ballistic missiles launched during 2016 totaled more than 20, including a ballistic missile disguised as a “Satellite,” Scud and Nodong missiles that are already deployed, as well as Musudan under development and SLBM (Submarine-Launched Ballistic Missile).

Since the start of 2017, North Korea has not changed its stance of continuing its activities for nuclear and missile development, and has repeatedly launched ballistic missiles including possibly new models.

Considering such a situation, the MOD/SDF continues to conduct thorough-going intelligence collection, warning and surveillance activities, and other

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12 JADGE is a core system for the command and control as well as communication functions. It centrally processes the information regarding aircraft captured by radars installed nationwide, and it provides fighters instructions required for scrambling against aircraft intruding into Japanese territorial airspace and air defense combat operations. In addition, it controls Patriot and radar, etc. in responses to ballistic missiles.

13 The term “ballistic missiles or other objects” refers to objects other than aircraft such as ballistic missiles which could cause grave damage to human life and property when they fall to the ground.
necessary activities in order to be able to respond to any situation, while closely cooperating with the United States and the Republic of Korea (ROK).

Further cooperation with the U.S. Government including the U.S. Forces in Japan is essential for efficient and effective operation of the BMD system. Thus, related measures including constant real-time sharing of BMD operational and relevant information, and the expansion of BMD cooperation have been agreed upon at the Japan-U.S. Security Consultative Committee (2+2 Meeting).

Furthermore, Japan has closely cooperated with the United States in responding to ballistic missiles, by means such as receiving Shared Early Warning (SEW) from the U.S. Forces, and sharing intelligence gathered by assets including transportable BMD radar (TPY-2 radar) and Aegis-equipped destroyers deployed in Japan by the U.S. Forces. Maintenance, enhancement and validation of Japan-U.S. bilateral response capabilities have been actively conducted through training and other activities. Since 2010, BMD exercise has been held between the MSDF and the U.S. Navy, connecting their ships and other equipment via a network and conducting a simulation of response to ballistic missiles, to improve tactical capabilities and strengthen bilateral coordination.

However, it is important that not only the bilateral cooperation between Japan and the United States but also the Japan-U.S.-ROK cooperation is strengthened. For this reason, Japan conducted the Japan-U.S.-ROK joint missile warning exercise, PACIFIC DRAGON 2016, in waters off Hawaii in June 2016, followed by the trilateral Japan-U.S.-ROK Missile Warning Exercise in waters near Japan in November 2016 as well as in January and March 2017 to strengthen the cooperation among the three countries. In addition, the General Security of Military Information Agreement (GSOMIA) entered into effect on November 23, 2016. As GSOMIA serves as a framework for protecting various confidential information including information regarding North Korea’s nuclear and missile threat directly exchanged between Japan and the ROK, which will be required for

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14 Information on the area and time of launch, the projected area and time, where and when objects fall relating to ballistic missiles launched in the direction of Japan, which is analyzed and conveyed to the SDF by the U.S. Forces in a short period of time after the launch. (The SDF started to receive the information since April 1996.)

15 The official name is the “Agreement Between the Government of Japan and the Government of the Republic of Korea on the Protection of Classified Military Information,” which was signed by Yasumasa Nagamine, Ambassador of Japan to the ROK, and Han Min-goo, Minister of National Defense of the ROK, in Seoul, ROK, on November 23, 2016.
Development of Interceptor Missiles (SM-3 Block IIA) with Enhanced Capabilities for Ballistic Missile Defense (BMD)

SM-3 Block IIA is being developed as a new interceptor missile for BMD.

SM-3 Block IIA is a missile that will be launched from Aegis destroyers, and intercept incoming ballistic missiles.

With much greater capability than its predecessor SM-3 Block IA, SM-3 Block IIA will also have extended coverage of defense. In addition, it will have improved capabilities to deal with incoming ballistic missiles taking a higher trajectory (lofted trajectory) than a normal trajectory. Therefore, mass production and deployment of SM-3 Block IIA will drastically strengthen Japan’s preparedness against ballistic missiles.

SM-3 Block IIA is a missile jointly developed by Japan and the United States. Japan-U.S. collaboration and cooperation for the research and development of this project has contributed to strengthening the tie between the two countries. The Japan-U.S. joint development project also has great significance for the defense industry in Japan when considering the advanced technologies and know-how that are fostered through development and production.

In the test launch conducted in February 2017, SM-3 Block IIA successfully intercepted a mock ballistic missile as a target, and its development has now entered the final phase. Both Japan and the United States are making ongoing efforts to realize the early completion of the development.

(3) Strengthening of the BMD System

In light of the severe security environment, the MOD conducts a project for improving its capabilities for responding to ballistic missile attacks. Specifically, of the six MSDF Aegis-equipped destroyers, the MOD is currently refurbishing two without BMD capabilities, Atago and Ashigara, to give them BMD capabilities.

The MOD also decided to acquire additional two Aegis-equipped destroyers with BMD capabilities using the FY2015 and FY2016 budgets. This will increase the number of Aegis-equipped destroyers with BMD capabilities from the present four to eight by FY2020.

Meanwhile, Japan and the United States are jointly developing advanced interceptor missiles for BMD (SM-3 Block IIA), which will be the successor of SM-3 Block IA to be mounted on Aegis-equipped destroyers, in order to deal with future threats posed by increasingly advanced practical and effective responses to various situations, further strengthening of the Japan-U.S.-ROK relationship will be expected.

The SDF engages in various training on a daily basis to improve its capability to counter ballistic missiles. In particular, taking into consideration the series of ballistic missile launches recently conducted by North Korea, the Minister of Defense announced the implementation of PAC-3 maneuver deployment training nationwide sequentially from June 2017 in an effort to strengthen the SDF’s capability to counter ballistic missiles and to enhance a sense of security and relief among the people of Japan.

See Part I, Chapter 2, Section 2-1 (North Korea); Part III, Chapter 2, Section 1-4-2 (Japan-Republic of Korea Defense Cooperation and Exchanges); Reference 40 (History of Efforts for BMD Development in Japan); Reference 41 (Flow of Response to Ballistic Missiles)
and diverse ballistic missile attacks.

At the National Security Council 9-Minister Meeting in December 2016, a decision was made to transition to joint production and the deployment phase. At the same time, expenses to acquire SM-3 Block IIA were budgeted for the first time in the FY2017 budget. Acquisition and deployment of SM-3 Block IIA are planned to be implemented in FY2021.

In comparison with the previous SM-3 Block IA, SM-3 Block IIA will have not only extended interceptable altitude and coverage of protection, but also have enhanced defeating capability and simultaneous engagement capability. In addition, it is expected that the interception capabilities of SM-3 Block IIA will be enhanced against ballistic missiles equipped with interception avoidance measures such as a decoy and ballistic missiles launched with an intention to avoid being intercepted by taking a higher than nominal trajectory (lofted trajectory).\(^\text{16}\)

Going forward, there will be eight Aegis-equipped destroyers with BMD capabilities, and SM-3 Block IIA will also be deployed. By around FY2021, there will be a strengthened system designed to continuously protect the whole of Japan.

With regard to Patriot PAC-3, necessary expenses have been appropriated in the supplementary budget for FY2016 to enable the acquisition of the enhanced capability type, PAC-3 (MSE) ( Missile Segment Enhancement), as soon as possible. Introduction of PAC-3MSE will realize the extension of interception altitude from about 10 km to 20-30 km, meaning that the coverage of protection (area) will expand more than twice compared with the current PAC-3.

As indicated in the National Defense Program Guidelines, the MOD intends to continue strengthening the readiness, simultaneous engagement capability and sustainable response capability of the BMD system, and will take all possible measures to protect the lives and property of the people in Japan.

Additionally, the MOD has conducted studies on a future ballistic missile interception system since FY2014. The FY2017 budget allows for expenses for the implementation of simulations, including measures to improve defense capabilities of ballistic missiles.

2 Missile Defense of the United States and Japan-U.S. BMD Technical Cooperation

(1) Missile Defense of the United States

The United States is developing a multi-tier missile defense system that combines defense systems suited for each of the following phases of the ballistic missile flight path to provide a mutually complementary response: (1) the boost phase, (2) the mid-course phase, and (3) the terminal phase. Japan and the United States have developed close coordination concerning ballistic missile defense, and a part of the missile defense system of the United States has been deployed in our country in a step-by-step manner.\(^\text{17}\)

(2) Japan-U.S. BMD Technology Cooperation, etc.

The Government commenced a Japan-U.S. cooperative research project on a sea-based upper-tier system in FY1999. As the result showed good prospects for resolving initial technical challenges, in December 2005, the Security Council and the Cabinet decided to start Japan-U.S. cooperative development of an advanced ballistic missile interceptor by using the results of the project as a technical basis. The joint development started in June 2006 with a view to expanding the coverage of protection and dealing with future threats posed by increasingly advanced and diverse ballistic missiles attacks.

In February and June 2017, Japan and the United States conducted sea launch tests of SM-3 Block IIA off the coast of Hawaii in the United States. These tests were intended to intercept a target, a mock ballistic missile, by an SM-3 Block IIA launched from an Aegis-equipped destroyer. In FY2017, the two countries will carry out data analyses of these sea launch tests and aim to complete development by the end of the fiscal year.

\(^{16}\) By taking a higher trajectory than minimum energy trajectories (trajectories that enable efficient flying of a missile and maximize its range), it takes a shorter range than the maximum range, but the falling speed of the missile becomes faster.

\(^{17}\) Specifically, a TPY-2 radar (so-called “X-band radar”) for BMD has been deployed at the U.S. Shariki Communication Site in 2006, and BMD-capable Aegis ships have been forward deployed in Japan and surrounding areas. In October 2006, Patriot PAC-3 units were deployed in Okinawa Prefecture, and in October 2007, a Joint Tactical Ground Station (JTAGS) was deployed in Aomori Prefecture. Furthermore, the 2nd TPY-2 radar was deployed at the U.S. Kiyogamisaki Communication Site in December 2014.

With regard to the Japan-U.S. cooperative development, it is necessary to export BMD related arms from Japan to the United States. In accordance with the Chief Cabinet Secretary’s statement issued in December 2004, it was determined that the Three Principles on Arms Exports would not apply to the BMD system and related matters under the condition that strict controls are maintained. Based on these circumstances, it was decided that the prior consent of Japan could be given to the third party transfer of the SM-3 Block IA under certain conditions. This decision was formally announced in the Joint Statement of the Japan-U.S. Security Consultative Committee (2+2 Meeting) in June 2011. The Three Principles on Transfer of Defense Equipment and Technology (Three Principles) received Cabinet approval in April 2014. However, with regard to exceptional measures instigated before the Three Principles were decided, overseas transfers will continue to be organized in the guidelines for the principles as allowable under the Three Principles.
In Japan where most of the towns and cities are highly urbanized, even small-scale infiltrations and attacks can pose a serious threat against the country’s peace and security. These cases refer to various mode and forms including illegal activities by infiltrated foreign armed agents\(^\text{19}\) etc., and sabotage carried out by foreign guerillas or special forces, which can be deemed as an armed attack against Japan.

**1 Basic Concept**

In the stage where the actual situation of intruders and the details of the ongoing case are not clear, the police primarily respond to the situation, while the MOD/SDF will collect relevant information and reinforce the security of the SDF facilities. When the situation is clearer and can be dealt with by the general police force, various forms of assistance such as transportation of police officers and provision of equipment to the police force will be carried out. If the case cannot be dealt with by the general police force, then public security operations by the SDF will be implemented. Furthermore, if it has been confirmed that an armed attack is being carried out against Japan, the SDF will respond under a defense operation order.

**2 Responses to Attacks by Guerillas and Special Operations Forces**

Typical forms of attacks by guerillas or special forces include the destruction of critical private infrastructure and other facilities, attacks against people, and assassinations of dignitaries. In the event that an armed attack is carried out against Japan by guerillas or special forces, the SDF will respond under a defense operation order.

In dealing with attacks by guerillas or special forces, the MOD/SDF responds with a particular emphasis on the establishment of a relevant information gathering posture, warning and surveillance to prevent invasions in coastal areas, protection of key facilities, and search and destroy of invading guerillas or special forces. Efforts will be made for early detection of attacks and indications

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\(^{19}\) Refers to persons committing illegal acts such as subversive activities in Japan while possessing weapons with significant wounding and killing power.
through warning and surveillance, and, as required, the SDF units will be deployed to protect key facilities such as nuclear power plants and necessary posture for protection will be established at an early stage. Based on this, in the event of an infiltration of our territory by guerrillas or special operations forces, they will be searched for and detected by reconnaissance units, aviation units and others and combat units will be promptly deployed to besiege and capture or to destroy them.

### Response to Armed Agents

#### (1) Basic Concept

While the police assumes primary responsibility for responding to illegal activities of armed agents, the SDF will respond in accordance with situational developments. When this happens, the SDF cooperates with the police force. Accordingly, with regard to public security operations of the SDF, the Basic Agreement concerning cooperation procedures between the SDF and the police, as well as local agreements between GSDF divisions/brigades and prefectural police forces, have been concluded.

#### (2) The MOD/SDF Initiatives

The GSDF continues to conduct exercises nationwide with the police of each prefecture and has been strengthening such collaboration by, for example, conducting field exercises at nuclear power plants throughout the country since 2012. Furthermore, joint exercises in dealing with suspicious vessels are also continuously conducted between the MSDF and the Japan Coast Guard.

### Response to Nuclear, Biological, and Chemical Weapons

In recent years, there has been strong recognition of the danger of NBC (Nuclear, Biological, and Chemical) weapon proliferation, which can cause indiscriminate mass casualties and contamination of an extensive area, and the means for transporting such weapons, as well as related equipment and materials, to terrorists and countries under suspicion of proliferating such weapons. The sarin gas attack on the Tokyo subway in 1995 is one of the examples of an incident in which these weapons were used.

#### (1) Basic Concept

In the event of the use of NBC weapons in Japan in a way that corresponds to an armed attack, the SDF will conduct defense operations to repel the armed attack and rescue victims. Furthermore, in the event of the use of NBC weapons in a way that does not correspond to an armed attack but against which the general police alone cannot maintain public security, the SDF will conduct public security operations to suppress the armed group and rescue victims in cooperation with related agencies. Furthermore, when the incident does not fall under the category of defense operations or public security operations, the chemical protection units of the GSDF and medical units of the ASDF, GSDF and MSDF will cooperate with relevant organizations in information gathering concerning the extent of the damage, decontamination activities, transportation of the sick and injured, and medical activities through disaster relief dispatches and civil protection dispatches.

#### (2) The MOD/SDF Initiatives

The MOD/SDF possesses and maintains the GSDF Central Nuclear Biological Chemical (NBC) Weapon Defense Unit and the Countermeasure Medical Unit as well as increasing the number of chemical and medical protection unit personnel, in order to improve the capability for responding to NBC weapon attacks. Also,
the GSDF has designated personnel to take initial action in the event of extraordinary disasters in order to allow operations to begin within approximately one hour.

The MSDF and the ASDF have also acquired protective equipment and materials to be used on vessels and at bases.

5 Initiatives towards Ensuring Maritime Security

1 Basic Approach by the Government

The National Security Strategy (NSS) states that Japan will play a leading role in maintaining and developing “Open and Stable Seas,” and will take necessary measures to address various threats in sea lanes of communication, including counter-piracy operations, ensuring safe maritime transport and promoting cooperation with other countries by conducting bilateral/multilateral joint exercises related to maritime security. In addition, it is stated that Japan will provide assistance to those coastal states alongside the sea lanes of communication and other states in enhancing their maritime law enforcement capabilities.

The new Basic Plan on Ocean Policy, which was given Cabinet approval in April 2013, states the following initiatives for ensuring the security of the oceans: reinforcement of the wide-area continuous surveillance system; programmed improvement of warships, aircraft and other vehicles; strengthening of the system of collaboration between the SDF and Japan Coast Guard; and development of a system of collaboration to ensure order and safety on the coasts and isolated islands. In addition, the Basic Plan on Ocean Policy states that in order to contribute to the creation and development of order on the ocean, it will make use of fora such as multilateral and bilateral ocean conferences to contribute to international rules- and consensus-building.

2 Initiatives of the MOD/SDF

In order to maintain the order of “Open and Stable Seas” and to ensure the safety of maritime transport, the MOD/SDF promotes various kinds of initiatives such as implementing counter-piracy activities, providing capacity building assistance to coastal countries, and enhancing joint training using a variety of opportunities.

In addition, in relation to China, consultation meetings have been held between the defense authorities of both countries towards the commencement of early implementation of the maritime and air communication mechanism in order to avoid and prevent unexpected situations.

Chapter 2, Section 1-4-4 (Japan-China Defense Exchanges and Cooperation); Chapter 2, Section 2 (Ensuring Maritime Security)

6 Responses in Space

Utilization of satellites enables the remote sensing of, communication at, and positioning on any area on Earth. Thus, countries around the world actively use outer space and make efforts to enhance the capabilities of a variety of satellites such as imagery satellites, communication satellites, and positioning satellites to enhance information gathering capabilities as well as command and control, and information and communications capabilities.

Under such circumstances, for Japan whose defense force is built in line with the basic principles of exclusively defense oriented policy, the use of space, which does not belong to any territories of any nations

24 Based on changes in the situation regarding the ocean, the Basic Plan on Ocean Policy specifies the following targets for Japan as an oceanic state and has set out initiatives to be pursued intensively: (1) international cooperation and contribution to the international community, (2) wealth and prosperity through ocean development and use, (3) shift from a country protected by the ocean to a country that protects the ocean, and (4) challenge toward unexplored frontiers.
and is not constrained by such factors as the surface of the terrain, is extremely important when: collecting information to detect indications of various incidents in advance and strengthening the surveillance activities in its surrounding seas and airspace; and ensuring means of communication by the SDF in their international peace cooperation activities and other activities.

See Fig. III-1-2-11 (Image of the Use of Space)

1 The Whole-of-Government Approach

The Office of National Space Policy established in the Cabinet Office in July 2012 engages in the planning, drafting, coordinating, and other policy matters relating to the Government’s development and use of space. In light of the environmental changes surrounding space policy and the new security policies stated in the NSS that was approved by the Cabinet in 2013, the Basic Plan on Space Policy was decided upon in the Strategic Headquarters for Space Development established within the Cabinet in January 2015. This Basic Plan was prepared as a 10-year development plan focusing on the next approximately 20 years to improve predictability of industries’ investments, and strengthen the industrial base, and has the following goals: (1) Ensuring space security; (2) Promoting the use of space in the civilian sector; and (3) Maintaining and strengthening of space industry and scientific/technological bases.

Responding to Japan’s progress in development and use of outer space, the Diet approved two laws—the Act on Ensuring Appropriate Handling of Satellite Remote Sensing Data (Remote Sensing Data Act) and Act on Launch of Artificial Satellites and Launch Vehicles and Control of Artificial Satellites (Space Activities Act) in November 2016.

Space Activities Act stipulates matters necessary to secure public safety and provide prompt protection of the victims from damages in Japan’s space development and use, such as a permission system for rocket launch, obligation for compensation, and government compensation. Remote Sensing Data Act stipulates matters necessary for ensuring proper handling of satellite remote sensing records (so-called satellite imagery). The Cabinet Office is working on the establishment of enforcement orders and regulations, aiming to put the laws into force in November 2017.

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25 In April 2016, the Office of National Space Policy was reorganized into the National Space Policy Secretariat.
26 Cabinet decision on April 1, 2016
**Initiatives of the MOD/SDF**

The use of space is extremely important for the MOD/SDF to conduct a range of tasks effectively and efficiently. Thus, in developing the SDF system in outer space, the NDPG stipulates that the MOD/SDF ensures the effective and stable use of space so that satellites can continuously exercise their capabilities even in contingencies. This is to be done by strengthening information gathering capabilities using multiple types of satellites with various sensors, reinforcing command, control and telecommunications capabilities, and enhancing the survivability of satellites through such initiatives as Space Situational Awareness (SSA). In implementing these initiatives, the MOD/SDF will form organic partnerships with relevant institutions and organizations both in Japan and the United States.

Reflecting the formulation of the National Security Strategy (NSS) and the NDPG, the MOD revised the “Basic Policy Relating to the Development and Use of Space” in August 2014. Also, from the perspective of further promoting cooperation in the space field between the defense authorities of Japan and the United States, the two countries established the “Space Cooperation Working Group (SCWG)” in April 2015 and so far held three meetings. The SCWG continues to promote consideration in broader fields such as: (1) promotion of policy-related consultation regarding space, (2) closer information sharing, (3) cooperation for nurturing and securing experts, and (4) implementation of tabletop exercises.

Furthermore, the MOD/SDF launched an X-band defense communications satellite called Kirameki-2, owned and operated by the MOD for the first time, in January 2017 to be used for the information communications of extremely important command and control in unit operations. Going forward, in light of the future increase in required communication for the building of a dynamic joint defense force, the MOD will conduct steady maintenance of Kirameki-1 and Kirameki-3 to realize integrated communications as well as high-speed and large capacity communications, thereby aiming for the early realization of a three-satellite system with all of the three X-band defense communications satellites.

**Development of the Space Situational Awareness (SSA) System**

When using outer space, it is necessary to ensure its stable use. However, there has been a rapid increase in the volume of space debris in outer space, raising the risk of significant damage to satellite functions caused by collision between debris and satellite. In addition, it is speculated that the development and verification test of a killer satellite, which approaches the target artificial
satellite to disturb, attack, and capture it, is underway, increasing the threat to the stable use of outer space. Reflecting such a situation, the MOD, based on the Basic Plan on Space Policy and in cooperation with relevant domestic organizations such as the Japan Aerospace Exploration Agency (JAXA) and the United States, aims to build a system for Space Situational Awareness (SSA) for monitoring outer space and accurately recognizing the situation. The designing of the whole system and the basic designing of each asset comprising the system is scheduled to take place in FY2016 and FY2017, respectively.

Going forward, the MOD plans to consider the development of a satellite, which contributes to Japan’s use of outer space including the SDF’s activities, and a sensor system, which can perform constant surveillance against space debris and suspicious satellites. In doing this, it is necessary to build an effective operational system in which relevant governmental agencies and organizations are integrated. In this respect, considering the fact that JAXA is promoting a plan to develop mainly a radar with an ability to monitor a low altitude orbit altitude under 1,000 km and an optical telescope with an ability to monitor a geostationary orbit (altitude approximately 36,000 km), the MOD will primarily review the development of radars with an ability to monitor a geostationary orbit.

In January 2017, the MOD/SDF launched an X-band defense communications satellite called Kirameki-2, the first satellite owned and operated by the MOD/SDF, from the Tanegashima Space Center in Kagoshima Prefecture.

Previously, the MOD/SDF has used satellite communication services provided by three private X-band communications satellites. However, with the end of the design life of these satellites approaching, a new arrangement is gradually being developed for the SDF to possess and operate three successor satellites. X-band communications satellite has the features of satellite communication, i.e., it is relatively unaffected by topography and has a wide coverage. X-band communications satellite also has the features of X-band communications, i.e., it is stable and unlikely to be affected by weather and other factors. These features enable timely and appropriate communications among geographically dispersed SDF units. For this reason, Kirameki-2 will be used for communicating information such as orders and coordination of the SDF units’ operations, and will function as an extremely important communication infrastructure for the security of Japan.

This initiative will bring about the following three improvements: (1) ensure smooth communication between the units of GSDF, MSDF, and ASDF, (2) enhance communication capacity, allowing for the transmission of larger image/video data than before, and (3) ensure communication requirements for the units, etc. engaging in duties across a wide area including overseas.

Launch of “Kirameki-2” X-band Defense Communications Satellite

In January 2017, the MOD/SDF launched an X-band defense communications satellite called Kirameki-2, the first satellite owned and operated by the MOD/SDF, from the Tanegashima Space Center in Kagoshima Prefecture.

Previously, the MOD/SDF has used satellite communication services provided by three private X-band communications satellites. However, with the end of the design life of these satellites approaching, a new arrangement is gradually being developed for the SDF to possess and operate three successor satellites. X-band communications satellite has the features of satellite communication, i.e., it is relatively unaffected by topography and has a wide coverage. X-band communications satellite also has the features of X-band communications, i.e., it is stable and unlikely to be affected by weather and other factors. These features enable timely and appropriate communications among geographically dispersed SDF units. For this reason, Kirameki-2 will be used for communicating information such as orders and coordination of the SDF units’ operations, and will function as an extremely important communication infrastructure for the security of Japan.

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Launch of Kirameki-2

(Tanegashima Space Center)

Kirameki-2 (image)
Information and communications technology has developed and been rapidly and widely adopted. As a result, it is now an essential infrastructure for socioeconomic activities. On the other hand, there is a possibility that people’s life and economic activities will be severely affected if the computer systems or networks fail. The same is true of both the MOD/SDF. If the critical functions of the SDF are intercepted by a cyber attack, there is a possibility that problems that threaten the core of Japan’s defense may arise.

1 The Whole-of-Government Approach and Other Initiatives

With regard to cyber attacks, the number of cases recognized as threats to Japanese governmental organizations and agencies in FY2015 reached approximately 6,130,000, and these threats have become increasingly serious.

In order to deal with the increasing threat to cybersecurity, in November 2014, the Cyber Security Basic Act was enacted. The Act aims to contribute to the security of Japan by clarifying the basic principles of Japan’s cyber security measures and the responsibilities of local governments, as well as by comprehensively and effectively promoting the measures regarding cyber security.

In response to this, in January 2015, the Cyber Security Strategic Headquarters was established in the Cabinet and the National center of Incident readiness and Strategy for Cyber Security (NISC) was established in the Cabinet Secretariat. The NISC is responsible for planning and promotion of cyber security-related policies and serves as the control tower in taking measures and responding to significant cyber security incidents in government organizations and agencies, as well as critical infrastructures. Furthermore, in September 2015, the Cyber Security Strategy was formulated for the comprehensive and effective promotion of measures pertaining to cyber security, with the aims: to create and develop free, fair and safe cyber space; to enhance the vitality of the economy and society and realize...
their sustainable development; to realize society in which citizens can live safely and with peace of mind; to contribute to peace and stability of the international community as well as the security of Japan.

2 Initiatives of the MOD/SDF

(1) Contribution to the Whole-of-Government Approach
Along with the National Police Agency, the Ministry of Internal Affairs and Communications, the Ministry of Economy, Trade and Industry, and the Ministry of Foreign Affairs, the MOD, as one of the five government agencies that cooperate particularly closely with the NISC, participates in cyber attack response training and personnel exchanges, and provides information about cyber attacks, etc. to the cross-sector initiatives led by the NISC as well as sending personnel to the CYber incident Mobile Assistant Team (CYMAT).

(2) Unique Initiatives by the MOD/SDF
As unique initiatives by the MOD/SDF, the SDF C4 (Command, Control, Communication & Computers) Systems Command and other systems are monitoring MOD/SDF communications networks around the clock. In March 2014, a “Cyber Defense Group” was established under the SDF C4 Systems Command to enhance and strengthen the system.

In addition, the MOD/SDF is engaged in holistic measures including the introduction of intrusion prevention systems in order to increase the safety of information and communication systems, development of defense systems such as the security and analysis device for cyber defense, enactment of regulations, stipulating postures and procedures for responding to cyber attacks, and development of human resources and technological bases, as well as research on cutting-edge technology.

The FY2017 budget sets out to further strengthen the operation and system of the “Cyber Defense Group” in order to appropriately deal with the threat posed by cyber attacks, which are becoming increasingly sophisticated and skillful by the day. Specifically, the MOD/SDF will develop a structure in which practical cyber training is conducted using a cyber training space that simulates the SDF’s command and control system as well as information communications networks, and a system in which penetration tests are conducted to examine the vulnerability of the SDF’s command and control system, etc., using the same method as actual cyber attacks. Along with these initiatives, an increase in the number of personnel is also planned.

(3) Cooperation with the United States
Since comprehensive defense cooperation, including joint response, between Japan and its ally the United States is vital, the two countries set up the Cyber Defense Policy Working Group (CDPWG) as a framework between the defense authorities of Japan and the United States. Under this framework, meetings have been held five times to discuss the following topics: (1) promotion of policy discussions regarding cyber issues, (2) closer sharing of information, (3) promotion of joint exercises incorporating response to cyber attacks, and (4) matters...
such as cooperation for training and maintaining experts. Moreover, in May 2015, the two countries announced a joint statement on the specific future direction of the cooperation.

In addition, Japan’s cooperation with the United States is to be further strengthened by such means as participation in the “Japan-U.S. Cyber Dialogue,” a whole-of-government approach by both nations, holding of the “Japan-U.S. IT Forum,” a framework between the defense authorities since 2002, and dispatching liaison officers to the U.S. Army’s cyber educational institution.

(4) Cooperation with Other Countries etc.

Japan has held cyber dialogues with the respective defense authorities of the United Kingdom, Australia, Estonia, and others to exchange views on threat awareness and relevant initiatives taken by each country. With NATO (North Atlantic Treaty Organization), Japan carries out initiatives looking at possible future operational cooperation, such as establishing a cyber dialogue between defense authorities called the Japan-NATO Expert Staff Talks on Cyber Defense and participating in the cyber defense exercise (Cyber Coalition) hosted by NATO as an observer. Furthermore, Japan has participated in the International Conference on Cyber Conflict (CyCon) and a cyber defense exercise (Locked Shields) organized by the Cooperative Cyber Defence Centre of Excellence (CCDCOE) based in Estonia.

In addition, the IT Forum has been held between the defense authorities of Singapore, Vietnam, and Indonesia to exchange views on initiatives in the information communications area including cybersecurity and current trends in technology.

In FY2017, there are plans to develop implementation systems for practical cyber training and penetration tests. The MOD/SDF, in preparation for such developments, is stepping up efforts to train SDF personnel and enhance their practical capabilities.
8 Response to Large-Scale Disasters

When disasters such as natural disasters occur, the SDF works in collaboration with municipal governments, engaging in various activities such as the search and rescue of disaster victims or missing ships or aircraft, controlling floods, offering medical treatment, preventing epidemics, supplying water, and transporting personnel and goods.

Outline of Disaster Relief Dispatches

In principle, disaster relief dispatch is conducted as follows: prefectural governors or other officials ask the Minister of Defense, or an officer designated by the Minister, to dispatch the SDF units, etc. in the event of natural disaster; and then the minister or the designated officer will dispatch the units if it is deemed to be necessary.

Flow of Events from the Point of Request to Dispatch and Withdrawal

1) Procedure for request
   - Normally requested in written form
   - Requested verbally or by telegram or telephone in case of emergency (a written request should later follow)

2) Content of request
   - Conditions of the disaster and reasons for the request
   - Desired duration for dispatch
   - Desired area for dispatch and desired activities
   - Other items for reference

Notes:
1. SDF ready reserve personnel and SDF reserve personnel will be called on by the Minister of Defense as necessary with the approval of the Prime Minister.
2. Disbandment of call-up of SDF ready reserve personnel and SDF reserve personnel must be done by the Minister of Defense.

State of Readiness for Disaster Dispatches (Standard)

Common to All
The state of readiness with which SDF troops can begin gathering information immediately after an earthquake of seismic intensity five-lower or higher occurs.

FAST Force (GSDF)
First response units throughout Japan (about 3,900 personnel, about 1,100 vehicles, and about 40 aircraft) are on standby around-the-clock and will be deployed in an hour upon receiving an order as a standard procedure. Various units including helicopters (video transmission), chemical protection, and bomb disposal are on standby in each regional army.

FAST Force (MSDF)
Vessels on standby: Designate one response vessel in each regional district
Aircraft on standby (about 20 aircraft): Deploy in 15 minutes to two hours in each base as a standard

FAST Force (ASDF)
Standby for scrambling against intrusions into airspace
Standby for aircraft rescue and emergency transport duties (about 10–20 aircraft): Deploy within 15 minutes to two hours in each base as a standard
*When an earthquake of seismic intensity five-upper or higher occurs, the mission of standby aircraft will be diverted to information collecting
necessary for responding to the disaster. This is because the course of action considered to be most appropriate is that prefectural governors and other officials grasp the overall conditions of the disaster and their own disaster relief capabilities first, and then decide whether to make a request for the SDF disaster relief dispatch. However, when a warning declaration is issued based on the Act on Special Measures Concerning Countermeasures for Large-Scale Earthquakes or a declaration of a nuclear emergency situation is issued based on the Act on Special Measures Concerning Nuclear Emergency Preparedness, the Minister of Defense is authorized to order a nuclear disaster dispatch upon the request of the Director of the Seismic Disaster Warning Headquarters and the Director of the Nuclear Disaster Countermeasures Headquarters (the Prime Minister).

The SDF has put in place arrangements for an initial response to ensure that disaster relief operations are conducted promptly. This is called “FAST-Force.”

2 Response of the MOD/SDF

(1) Response to Natural Disasters

a. Disaster Relief Dispatch for Heavy Rain Disaster Caused by Typhoon No. 10

(1) On August 30, 2016, road flooding, landslide and other damages occurred due to Typhoon No. 10, and some individuals in Hashino-cho in Kamaishi City and Iwaizumi-cho in Shimoei-gun, Iwate Prefecture became isolated. On the same day, the SDF, responding to a disaster relief dispatch request from the Governor of Iwate Prefecture, started to carry out rescue operations for isolated individuals, water supply assistance, elimination of road obstacles, transportation of personnel and goods, meal providing assistance, and bathing assistance, which continued until September 16, 2016. The scale of this disaster relief dispatch was approximately 2,090 personnel, 690 vehicles, and 77 aircraft.

(2) On October 31, 2016, heavy rainfall due to Typhoon No. 10 also caused the isolation of individuals and water outages within the Tokachi and Kamikawa regions in Hokkaido. In response to a disaster relief dispatch request from the Governor of Hokkaido made on the same day, the SDF carried out rescue operations for isolated individuals, searches for missing persons, water supply assistance, bathing assistance, flood control activities, and transportation of personnel and goods until September 6 and September 18 in the Kamikawa region and the Tokachi region, respectively.

The scale of this disaster relief dispatch was approximately 1,705 personnel, 790 vehicles, 19 aircraft, and 5 patrol boats.

b. Disaster Relief Dispatch for Earthquake Disaster with an Epicenter in the Central Region of Tottori Prefecture

On October 21, 2016, an earthquake with an epicenter in the central region of Tottori Prefecture (M6.6) occurred, and the maximum seismic intensity of six lower was observed in Kurayoshi City, Yurihama-cho and Hokuei-cho, Tottori Prefecture. As this earthquake caused water outage in Kurayoshi City, the SDF, responding to a disaster relief dispatch request from the Governor of Tottori Prefecture on the same day, carried out water supply assistance and maintenance activities for public facilities and their surroundings until October 28, 2016.

The scale of this disaster relief dispatch was approximately 620 personnel, 140 vehicles, and 13 aircraft.

c. Disaster Relief Dispatch in Response to Bird Flu Outbreak

During the period from November 2016 to March 2017, the occurrence of highly pathogenic avian influenza was confirmed at poultry farms in Hokkaido, Miyagi, Chiba, Niigata, Gifu, Saga, Kumamoto and Miyazaki Prefectures, requiring epidemic control measures to be taken such as inspecting poultry farms, conducting tests, and culling infected birds.

30 The Commandant of the Japan Coast Guard, the Director General of the Regional Coast Guard Headquarters, and the Director of the Airport Administrative Office may request a disaster relief dispatch. With regard to disaster relief dispatch, earthquake prevention dispatch, and nuclear disaster relief dispatch, (1) SDF personnel ordered for the dispatch may exercise authority based on the SDF Law; (2) SDF Reserve Personnel and SDF Ready Reserve Personnel may be called up for service in the event of disaster relief dispatch, and SDF Ready Personnel in the event of earthquake prevention dispatch or nuclear disaster relief dispatch; and (3) special units may be temporarily formed as necessary.

31 The Prime Minister issues an earthquake alert with the endorsement of the Cabinet in the event that an earthquake prediction was reported by the Director-General of the Japan Meteorological Agency (JMA) and when it is deemed necessary to urgently implement emergency earthquake disaster prevention measures.
as euthanasia of poultries. In response to the request for disaster relief dispatch from the governors of these prefectures, the SDF carried out euthanasia of poultries.

The SDF was dispatched for a total of 10 times (one dispatch to Hokkaido, Miyagi, Chiba, Gifu, Saga and Kumamoto Prefectures as well as two dispatches to Niigata and Miyazaki Prefectures) with approximately 9,105 personnel and approximately 1,500 vehicles.

d. Disaster Relief Dispatch in Response to Forest Fire

Among the forest fires that occurred nationwide between April and May 2017, including the ones in Iwate, Fukushima, Nagano and Shizuoka Prefectures, the respective local governments carried out firefighting activities but struggled to control the fire. Thus, the SDF in response to a request for disaster relief dispatch from the governors of these prefectures conducted aerial firefighting activities.

The SDF was dispatched for a total of five times (one dispatch to Iwate, Nagano and Shizuoka Prefectures as well as two dispatches to Fukushima Prefecture), comprising approximately 2,735 personnel, approximately 555 vehicles and 182 aircraft. Approximately 9,881.5 tons
of water was sprinkled, with water sprinkling being conducted 2,483 times.

(2) Transportation of Emergency Patients

The SDF uses its aircraft to transport emergency patients from isolated islands and remote areas with insufficient medical facilities (transportation of emergency patients). In FY2016, out of a total of 516 cases of disaster relief dispatches, 409 cases involved the transportation of emergency patients, with dispatches to remote islands such as the Southwestern Islands (Okinawa and Kagoshima Prefectures), the Ogasawara Islands (Tokyo), and remote islands of Nagasaki Prefecture representing the majority of such cases.

In addition, the SDF carries out sea rescues upon requests by the Japan Coast Guard on such occasions as transport of emergency patients from vessels navigating areas of ocean far from the mainland where the aircraft of other organizations are unable to respond, due to reasons including a short flight range; emergencies of vessels due to incidents such as fire, flooding or capsizing. Furthermore, the SDF conducts wide-area medical transport operations for serious-case patients, by C-130H transport aircraft, utilizing its mobile medical units in certain occasions.

Furthermore, in FY2016, the SDF carried out 57 dispatches of firefighting support, with 53 cases responding to fire in the areas near SDF facilities.

(3) The MOD/SDF Response to Nuclear Disaster

In order to respond to nuclear disasters, the MOD/SDF has formulated “The SDF Nuclear Disaster Response Plan.” The SDF also participates in general nuclear disaster prevention drills jointly implemented by the government, local governments, and nuclear operators, to confirm the effectiveness of local governments’ evacuation plan and to strengthen cooperation with relevant agencies in a nuclear disaster emergency. Moreover, since October 2014, SDF personnel (5 personnel as of April 1, 2017) were transferred (on temporary assignment) to a section in charge of nuclear disaster prevention within the Cabinet Office as part of an effort to enhance the effectiveness of nuclear disaster response capabilities.

(4) Formulating Plans for Responding to Various Disasters

In the event of the occurrence of various disasters, the MOD/SDF will take all possible measures such as swift transportation and deployment of sufficiently sized units in their initial response. By establishing a rotating staffing posture based on a joint operational approach, the MOD/SDF will ensure that it is able to sustain a well-prepared condition for a long-term response. In doing so, the MOD/SDF will fully take into account the lessons learned from the Great East Japan Earthquake and other disasters.

The MOD/SDF is in the process of formulating various contingency plans for responses to large-scale earthquakes,
which are under consideration at the Central Disaster Management Council, based on the Ministry of Defense Disaster Prevention Plan to respond to such earthquakes.

(5) Exercises Involving the SDF

In order to respond to large-scale and various other disasters in a speedy and appropriate manner, the SDF carries out various disaster prevention drills, and also actively participates in disaster prevention drills organized by the Japanese Government or local government and is seeking to ensure cooperation with various ministries and agencies, and local governments.

a. Joint Exercise for Rescue (JXR)

From June to July 2016, the SDF conducted a command post exercise and a tabletop exercise in preparation for the predicted Nankai Trough earthquake to enhance the SDF’s earthquake response capability.

b. Remote Island Disaster Relief Exercise (RIDEX)

In September 2016, the SDF participated in a general disaster prevention training planned and organized by Okinawa Prefecture and conducted a field training exercise to deal with sudden large-scale disasters in a remote island to strengthen collaboration with relevant organizations and maintain as well as enhance the SDF’s ability to respond to disasters in remote islands.

c. Other

The SDF worked to enhance their earthquake response capability, for example, by conducting the Nankai Rescue 28, an exercise in preparation for the predicted earthquake along the Nankai trough implemented by the GSDF Middle Army in July 2016, and an exercise in preparation for the predicted Tokyo Inland earthquake implemented by the GSDF Eastern Army in March 2017.

(6) Collaboration with Local Governments and Other Relevant Organizations

It is important for the SDF to strengthen collaboration with local governments and other relevant organizations under normal circumstances for the purpose of conducting disaster relief operations smoothly. For this reason, the SDF implements various measures including: (1) Establishment of the post of Liaison Officer for Civil Protection and Disaster Management (administrative official) at the SDF Provincial Cooperation Offices; (2) Temporary assignment of SDF officers to the department in charge of disaster prevention at the Tokyo Metropolitan Government, and mutual exchange between administrative officials of both the GSDF Middle Army Headquarters and Hyogo Prefectural Government; and (3) Recommendation of retired SDF personnel with knowledge in disaster prevention in accordance with requests from local governments. As of the end of March 2017, as many as 402 retired SDF personnel are working in disaster prevention and other sections in 271 local governments in 46 prefectures throughout the country. Such cooperation in human resources is a very effective way of strengthening collaboration between the MOD/SDF and local governments, and its efficacy was confirmed through the experiences of the Great East Japan Earthquake and other disasters. In particular, each GSDF regional Army establishes a forum for interaction with senior directors for crisis management and other officials from local governments and exchange information and opinions to strengthen collaboration with those local governments.

(9) Transport of Japanese Nationals Overseas, etc.

In the event of natural disasters, insurgencies, and other emergencies overseas, the Minister of Defense can order SDF units to rescue or transport Japanese nationals and other people overseas upon request from the Minister for Foreign Affairs to guard, rescue or transport Japanese nationals overseas, etc. and subsequent consultations with the Minister, on the basis of Article 84-3 (measures to rescue Japanese nationals overseas, etc.) or Article 84-4 (transport of Japanese nationals overseas, etc.) of the SDF Law. Provisions on measures to rescue Japanese nationals overseas, etc. were newly established in the Legislation for Peace and Security enacted in September 2015.
For the prompt, appropriate and reliable implementation of these activities regarding Japanese nationals overseas, the SDF is prepared to dispatch its units swiftly. Specifically, the SDF maintains operational readiness, with the GSDF designating a helicopter unit and leading transport unit personnel, the MSDF designating vessels such as transport ships (including ship-based aircraft), and the ASDF designating airlift units and personnel for dispatch.

Since the rescue and transport of Japanese nationals overseas require close coordination among the GSDF, MSDF and ASDF, exercises are carried out constantly with respect to the transport of Japanese nationals overseas, etc. In August 2016, an exercise for the transport of Japanese nationals overseas was conducted in Djibouti with the aim of strengthening cooperation between the SDF and the U.S. Forces. Furthermore, in December 2016, the SDF carried out an exercise for the rescue of Japanese nationals overseas to practice for the first time the whole process of the rescue of Japanese nationals overseas.

In the annual lateral joint exercise “Cobra Gold” that took place in February 2017 in Thailand, the MOD/SDF participated in the exercise for the rescue of Japanese nationals overseas. In cooperation with the Ministry of Foreign Affairs and the Japanese Embassy in Thailand, and others, the staff of the embassy and their family members also participated in the exercise. In the exercise, MOD/SDF practiced the whole process of the rescue measures, and strengthened collaboration between the MOD/SDF and the Ministry of Foreign Affairs regarding the measures to rescue Japanese nationals overseas.

With respect to the terrorist attack in Dhaka, Bangladesh, which occurred in July 2016, a government aircraft was sent from the ASDF Special Aircraft Group (belong to the Chitose Air Base) to Dhaka for the purpose of transporting Japanese victims and others involved based on Article 84-4 of the SDF Law (Transportation of Japanese nationals overseas), and the bodies of Japanese victims (seven nationals), their families, and other involved parties were transported to Japan. In relation to the deterioration of the situation in South Sudan in July of the same year, the ASDF transport aircraft C-130H were sent to transport four embassy staff from Juba to Djibouti.

Part II, Chapter 3, Section 2-1 (Outline of the Act for the Development of the Legislation for Peace and Security)

10 Readiness against Invasion

The NDPG states that only the necessary level of readiness against land invasions involving the mobilization of large ground forces, which was expected primarily during the Cold War, will be retained.

In case Japan faces a full-scale invasion, the SDF will respond to the situation in an aligned and systematic manner based on their integrated operations. Their operations are categorized into (1) operations for aerial air defense operations, (2) defense operations protecting waters around Japan, (3) operations protecting the land, and (4) operations ensuring security in maritime communication, based on the characteristic of their purposes. In executing these operations, the U.S. Forces will assist the operations implemented by the SDF and deploy operations to complement the capabilities of the SDF, including the use of striking power, in line with the Guidelines for Japan-U.S. Defense Cooperation.

1 Air Defense Operations

Based on the geographic features of Japan, in that it is surrounded by the sea, and the features of modern wars, it is expected that Japan will be repeatedly hit by rapid and surprise aerial attacks by aircraft and missiles in the case where a full-scale invasion against Japan occurs. Operations for aerial defense can be categorized into comprehensive aerial defense mainly conducted by the ASDF and individual aerial defense conducted by

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32 Aerial attacks are important elements influencing the results of modern wars. It is vital to obtain air superiority before or at the same time as implementing ground or maritime operations.

33 A special characteristic of aerial defense operations is that initial response is critical and can influence the entirety of operations. Thus, Japan needs to maintain its readiness for a quick initial response on an ongoing basis in peacetime, regularly collect information, and rapidly and comprehensively exert combat capabilities from the outset of operations.
Lieutenant Colonel (ASDF) Nakano, ASDF Air Defense Command

F-35A has high stealth capabilities as well as a remarkably improved system in comparison with former fighters.

On November 17, 2016, the ASDF received the first F-35A. As of May 2017, the ASDF is conducting training for pilots using four F-35A aircraft at the Luke Air Force Base in Arizona, United States in preparation for the commencement of the operation of F-35A.

It was fine weather on the day of the first flight, February 7, 2017. I applied myself methodically to the preliminary training using high performance simulators, etc. and managed to complete the first flight of F-35A without any trouble. I really felt that the F-35A was a fantastic fighter with excellent maneuverability and situational recognition ability, which was realized by utilizing advanced technologies at their highest level. The first flight turned a new page in the history of the ASDF, while it has also become an unforgettable experience in my career as a pilot.

Going forward, F-35A will be deployed at the ASDF Misawa Air Base. I am sure that F-35A will make significant contributions to Japan’s peace and stability along with other equipment possessed by the ASDF. I will continue using the skills and knowledge acquired through the training in the United States and the mutual relationship of trust cultivated with U.S. Forces personnel, and intend to contribute to building an even more robust Japan-U.S. relationship.
Comprehensive aerial defense aims to deal with enemy aerial attacks at the farthest point from our territory, prohibiting enemies from gaining air superiority and preventing harm to the people and the sovereign territory of Japan. At the same time, efforts will be made to inflict significant damage on the enemy thus making the continuation of their aerial attack difficult.

2 Defense Operations Protecting Waters Surrounding Japan

If an armed attack is carried out against Japan, which is an island country, aerial attacks are expected to be combined with attacks against our ships and territory by enemy destroyers. In addition, transport vessels could be deployed to enable massive enemy ground forces to invade our territory. Our defense operations protecting the waters surrounding Japan are composed of measures at sea, measures in waters around our coasts, measures in major straits, and aerial defense above waters around Japan. We need to protect the waters around our country by combining these multiple operations, blocking the invasion of our enemies, and attacking and depleting their combat capabilities.

3 Operations Protecting the Land

In order to invade the islands of Japan, invading countries are expected to gain sea and air superiority, followed by the landing of ground troops from the sea and airborne troops from the air.

For invading ground and airborne troops, it tends to be difficult to exert systematic combat capabilities while they are moving on their vessels or aircraft or right before or after they land in our territory. As we protect our land, we need to make best use of this weakness to deal with our enemies between coastal and sea areas or at landing points as much as possible and attack them at an early stage.

4 Operations Ensuring Security in Maritime Transportation

Japan depends upon other countries for the supply of much of its resources and food, making maritime transportation routes the lifeblood for securing the foundation of our existence and prosperity. Furthermore, if our country comes under armed attack, etc., maritime transportation...
routes will be the foundation to maintain continuous warfare capabilities and enable the U.S. Forces to come and assist in the defense of Japan.

In operations to ensure the safety of our maritime transportation, the SDF combines various operations such as anti-sea, anti-submarine, anti-air and anti-mine operations to patrol,\(^{34}\) defend SDF ships, and protect straits and ports, as well as setting up sea lanes\(^{35}\) to directly defend Japanese ships, etc. Aerial defense (anti-air operations) for Japanese ships on maritime transportation routes is conducted by destroyers, and support from fighter jets and other aircraft is provided as required.

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**11 Response to Other Events**

**1 Response to Situations that will Have an Important Influence on Japan’s Peace and Security**

In the event of situations that will have an important influence on Japan’s peace and security, the MOD/SDF will provide materials and services as rear area support activities and conduct rear area search and rescue activities or ship inspection activities as stipulated in the Act Concerning Measures to Ensure Peace and Security of Japan in Situations that will Have an Important Influence on Japan’s Peace and Security and the Ship Inspection Operations Act.

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\(^{34}\) The act of systematically monitoring a specific area with the purpose of gathering information and intelligence to prevent a surprise attack by an opposing force.

\(^{35}\) Relatively safe marine areas defined to enable the transportation of ships. The locations and width of sea lanes change depending on the situation of a specific threat.
stage. To this end, the MOD/SDF always makes efforts to collect information swiftly and accurately by using various methods.

Some examples of intelligence collection methods used by the MOD/SDF include: (1) collecting, processing and analyzing signals emanating from military communications and electronic weapons in the air over Japanese territory; (2) collecting, interpreting, and analyzing data from various imagery satellites (including Information Gathering Satellite); (3) warning and surveillance activities by ships, aircraft and other vehicles; (4) collecting and organizing a variety of open source information; (5) information exchanges with defense organizations of other nations; and (6) intelligence collection conducted by defense attachés and other officials.

As the security environment surrounding Japan has become increasingly severe, strengthening intelligence capabilities is considered to be an increasingly important issue. For this reason, the MOD is currently promoting comprehensive enhancement of its intelligence capabilities at all stages, including collecting, analyzing, sharing, and securing intelligence. Specifically, the MOD will move forward with the high-level use of geospatial data such as visualization of situations by fusing various information, securing highly competent analysts by such means as integrating and strengthening educational curricula, and enhancing the dispatch posture of defense attachés.

Under such a situation, in light of the importance of the Middle East areas and the necessity of intelligence gathering regarding the activities of ISIL and international terrorism, defense attachés were newly dispatched to Jordan and the United Arab Emirates in March 2017. Another defense attaché has also been dispatched to Mongolia to promote strengthening of the intelligence gathering system and defense cooperation in the Asia-Pacific region. Additional dispatch of defense attachés to the Philippines and Vietnam, which are located in important sea lanes for Japan, during FY2017 is also planned, while there is a plan to resume the dispatch of defense attachés to Finland that has been suspended since 2014 in order to respond to the recent changes in the situation in Europe, including the deteriorating situation in Ukraine.

36 Information Gathering Satellite (IGS) is operated by the Cabinet Satellite Intelligence Center. The MOD, along with other ministries and agencies, utilizes the imagery intelligence provided by the IGS.