



# **Weathering the storm**

## **Factoring climate change into**

### **▶ defense policy**

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# Overview



- ▶ What's at stake?
- ▶ How are Japan's SDF affected?
- ▶ Security risks
- ▶ Measuring the impact
- ▶ Tokyo's response
- ▶ Japan's future strategy
- ▶ What more can be done?

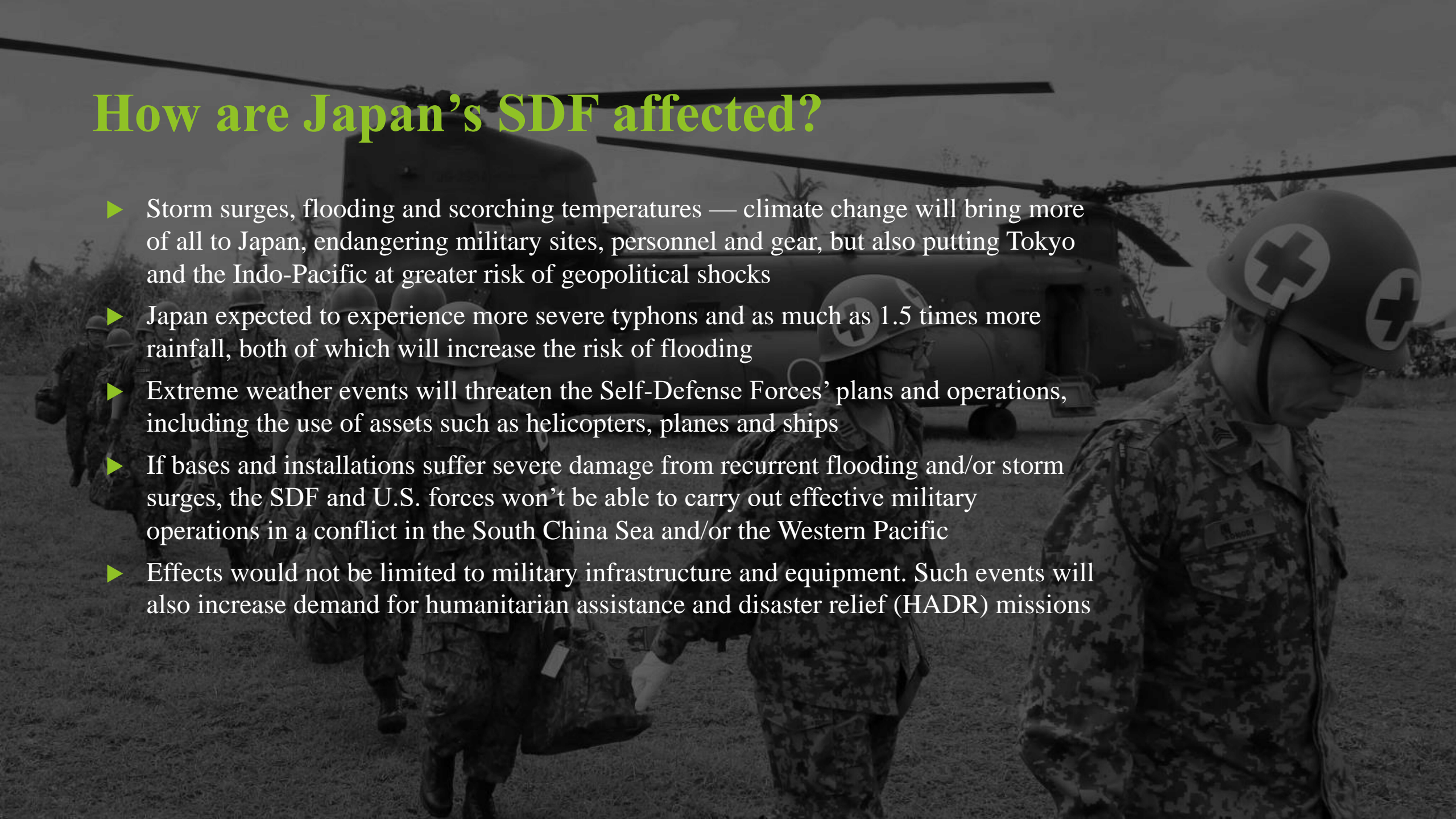


## What's at stake?

- ▶ Climate change is not only impacting weather events, but also affecting the global geopolitical landscape
- ▶ Small islands in the Pacific and Indian oceans as well as coastal megacities in China and South and Southeast Asia already at risk
- ▶ Intensifying effects of climate change will likely aggravate security issues and resource competition in the AsPac region
- ▶ Growing ocean levels will affect disputed low-lying maritime features, warming oceans could shift waning fish stocks' and distribution and transboundary water management will become more fraught.
- ▶ The Pentagon has identified climate change as a critical national security threat. This could undermine the stability of politically and economically vulnerable nations in Asia

# How are Japan's SDF affected?

- ▶ Storm surges, flooding and scorching temperatures — climate change will bring more of all to Japan, endangering military sites, personnel and gear, but also putting Tokyo and the Indo-Pacific at greater risk of geopolitical shocks
- ▶ Japan expected to experience more severe typhons and as much as 1.5 times more rainfall, both of which will increase the risk of flooding
- ▶ Extreme weather events will threaten the Self-Defense Forces' plans and operations, including the use of assets such as helicopters, planes and ships
- ▶ If bases and installations suffer severe damage from recurrent flooding and/or storm surges, the SDF and U.S. forces won't be able to carry out effective military operations in a conflict in the South China Sea and/or the Western Pacific
- ▶ Effects would not be limited to military infrastructure and equipment. Such events will also increase demand for humanitarian assistance and disaster relief (HADR) missions





# Security risks

- ▶ The more the SDF responds to natural disasters, whether in Japan or abroad, the greater the toll this will take on personnel and resources that would otherwise be needed for national defense
- ▶ The number of training days could plummet due to damaged facilities and disrupted access, while also making disaster relief deployments longer and more complex
- ▶ Increased health risks to SDF personnel
- ▶ A drop in SDF readiness could impact Japan's deterrence strategy and its new, more proactive defense posture

# Measuring the impact

- ▶ How much each military facility in Japan would be affected remains unclear
- ▶ Sea levels along the Japanese coastline have been rising since the 1980s and are predicted to increase by up to 1 meter by the end of this century
- ▶ This suggests military facilities near the ocean, including those at Sasebo, Nagasaki Prefecture; Yokosuka, Kanagawa Prefecture; and in Okinawa Prefecture, would be at even greater risk from storm surges, flooding and coastal erosion
- ▶ The exact impact will depend on several factors, including the facilities' locations, the scale of sea level rise, the occurrence of additional hazards and the facilities' capacity to increase their resilience against those hazards
- ▶ Moreover, each facility's degree of exposure to extreme weather is projected to change at different times in the future depending on greenhouse gas emission scenarios.
- ▶ This could affect capabilities in a Taiwan contingency and will influence decisions on the location of future facilities

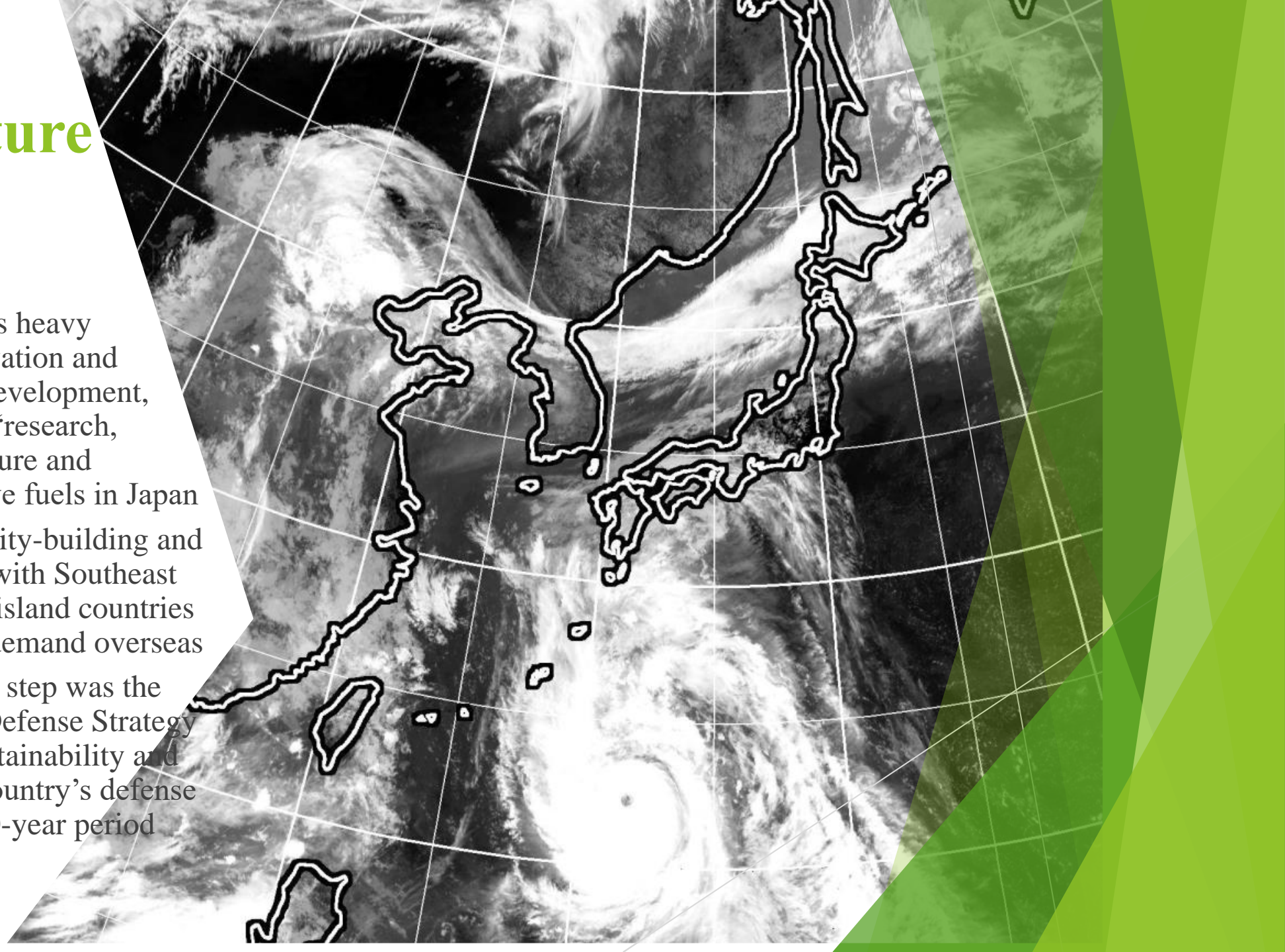
# Tokyo's response

- ▶ In mid-2021 Japan declares climate change a security issue
- ▶ An important factor was Tokyo's commitment in October 2020 to become a carbon-neutral economy by 2050, with MoD and SDF set to reduce emissions by 50% by 2030 from the level in fiscal year 2013, excluding emissions produced by defense equipment
- ▶ Biggest step forward was the ministry's launch in August 2022 of its first Response Strategy on Climate Change



# Japan's future strategy

- ▶ The strategy places heavy emphasis on innovation and Japanese energy development, setting a target to “research, develop, manufacture and procure” alternative fuels in Japan
- ▶ It prioritizes capacity-building and expertise-sharing with Southeast Asian and Pacific island countries to reduce HADR demand overseas
- ▶ Another important step was the revised National Defense Strategy to improve the sustainability and resilience of the country's defense facilities within 10-year period





# What more can be done?

- ▶ Ensure budget increases account for climate-change measures
- ▶ The transition will also require a range of updates to installations such as building energy infrastructure to power future military needs, and develop new sources of fuel
- ▶ The SDF is being pulled in several directions at once: making the energy transition, improving resilience, increasing HADR missions and all the while trying to upgrade its overall capabilities as Japan updates its defense strategy
- ▶ And as the impact increases, this threatens to push SDF to the limit



**Thank you!**

