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Critical Situation of Ocean is a global common recognition

Five Threats to the Ocean (World Economic Forum 2014)

- 1. Overfishing
- 2. Coastal pollution
- 3. Habitat destruction
- 4. Global Warming
- 5. Ocean Acidification

G7 Ministers of Science Communiqué (Germany 2015)

G7 Ministers of Science recognize that all of the changes in the oceans, such as

- · ocean acidification
- warming and de-oxygenation
- · loss of marine biodiversity
- · degradation of marine ecosystems have profound impacts on human wellbeing and human societies in many regions of the earth.

G7 in Japan (2016) Follow up

- Support global ocean observation e.g. ARGO
- · Support Ocean assessment through UN regular process (World Ocean Assessment)
- · Take note on marine litter issue
- · Promote Open Science
- · Promote G7 collaboration
- Enhance capacity building















1. About Science 20 (S20)

- S20 is the forum consists of science academy of the G20 members, and publishes the scientifically-founded joint-statement for the G20 Summit
- In 2019, Science Council of Japan hosts the third S20

Lincei National Academy (Italy)

Discuss

pertinent

issues of

the

world

among

S20

German Academy of Sciences, Leopoldina

The Royal Society

US National Academy of Sciences

French Academy of Sciences

Science Council of Japan(host)

Turkish Academy of Sciences

King Abdullah University of Science and Technology (Saudi Arabia)

Academy of Sciences of South Africa

Russian Academy of Sciences

Royal Society of Canada

European Commission (EU)

National Academy of Exact, Physical and Natural Sciences (Argentina)

Australian Academy of Sciences

Brazilian Academy of Sciences

Chinese Academy of Sciences

Indian National Science Academy

Indonesian Academy of Sciences

Mexican Academy of Sciences

G20 **Summit**

Propose







3. S20 Japan 2019



- **Public interest in marine environment** e.g. plastic waste
- Global change of ocean environment
- **Need for scientific recommendation**

S20 Japan 2019(The 3rd forum)

Date: (Wed) 6th March 2019

Venue: Science Council of Japan (Tokyo)

Theme:

"Threats to Coastal and Marine Ecosystems, and Conservation of the Ocean Environment – with Special Attention to Climate Change and Marine Plastic Waste"





S20









Increase in the amount of CO₂

Increase in the amount of Marine Plastic Waste



Warming

Acidification

Deoxygenation

Accidental ingestion

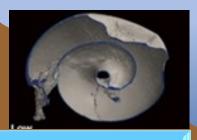
Contamination of marine products by microplastics

Impact on fisheries/tourism



https://sangakukan.jp/journal/journal contents/2009/11/articles/0911-03-2/0911-03-2 article.html

Source: Kimoto (JAMSTEC)



4.Threats to the Marine Ecosystems





source: JAMSTEC





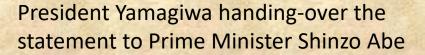


5. Recommendations of the S20 Japan 2019 Statement

- 1) Use of <u>expert, evidence-based advice</u>
- 2) Redoubling <u>actions aiming to reduce stressors</u> on marine ecosystems
- 3) Establishment of <u>more recycling and energy efficient practices at</u> <u>national, city and local levels</u>
- 4) <u>Capacity building for essential research infrastructures</u> (including research vessels and survey capabilities)
- 5) Establishment of an improved data storage and management system that can be accessed by scientists globally
- 6) Sharing of information gained through research activities under extensive and multinational collaboration









President Yamagiwa handing-over the statement to His Excellency, Mr. Yoshiaki Harada

Osaka Blue Ocean Vision 2019 from G20 Declaration

39. We reiterate that measures to address marine litter, especially marine plastic litter and microplastics, need to be taken nationally and internationally by all countries in partnership with relevant stakeholders. In this regard, we are determined to swiftly take appropriate national actions for the prevention and significant reduction of discharges of plastic litter and microplastics to the oceans. Furthermore, looking ahead beyond those initiatives and existing actions by each member, we share, and call on other members of the international community to also share, as a common global vision, the "Osaka Blue Ocean Vision" that we aim to reduce additional pollution by marine plastic litter to zero by 2050 through a comprehensive life-cycle approach that includes reducing the discharge of mismanaged plastic litter by improved waste management and innovative solutions while recognizing the important role of plastics for society. We also endorse the G20 Implementation Framework for Actions on Marine Plastic Litter.





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