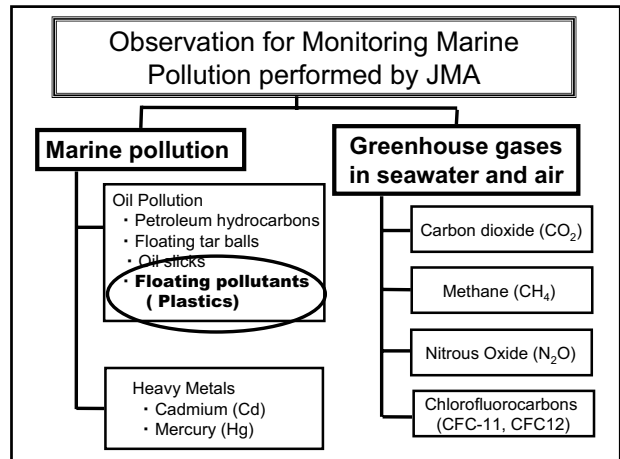


### Observation of Floating Plastics in the Sea adjacent to Japan by Japan Meteorological Agency

Mitsuhiko Ida  
Deputy Director of Ocean Office  
Ministry of Land, Infrastructure and Transport

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### Observation of Floating Plastics

**137°E line**

**Settled observational lines of JMA Research Vessels (2005)**

JMA started this observation along 137°E line in 1977, nearly 30 years ago.

**JMA Research Vessels**

- South Sea (SS-01) 2005
- South Sea (SS-02) 2005
- South Sea (SS-03) 2005
- South Sea (SS-04) 2005
- South Sea (SS-05) 2005
- South Sea (SS-06) 2005
- South Sea (SS-07) 2005
- South Sea (SS-08) 2005
- South Sea (SS-09) 2005
- South Sea (SS-10) 2005
- South Sea (SS-11) 2005
- South Sea (SS-12) 2005
- South Sea (SS-13) 2005
- South Sea (SS-14) 2005
- South Sea (SS-15) 2005
- South Sea (SS-16) 2005
- South Sea (SS-17) 2005
- South Sea (SS-18) 2005
- South Sea (SS-19) 2005
- South Sea (SS-20) 2005

- >Area: The seas adjacent to Japan and the western North Pacific.
- >Method: Continuous watch from the bridge during daytime.
- >Record: Whenever floating pollutants observed.

### Distribution of floating plastics (2005)

Numbers of observed floating plastics. (along cruise tracks of 100km)

- >From spring to autumn, more than 20pieces/100km of floating plastics are found in the seas adjacent to Japan.
- >Relatively many floating plastics are found around 30°N, south of the Kuroshio and the Kuroshio Extension.
- >Those tendency has been the same for recent several years.

### Number and composition of floating plastics

Number of floating plastics (observed in 2005)

Legend: Polystyrene form, Fishing gear, Plastic Film, Other plastics

- >In general, large proportion of floating plastics was occupied by "Polystyrene form" (more than 60%).
- >About twice of average of floating plastics were found in East China Sea and NOWPAP Sea.
- >"Fishing gear" accounted for about 50% in East China Sea.

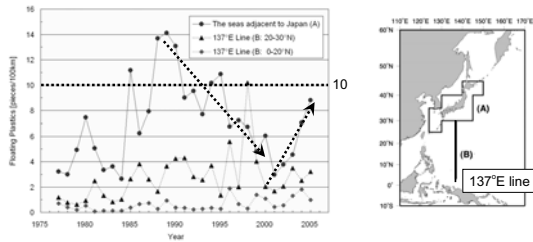
### Average distribution of floating plastics

20-year average (1981-2000) for each 5/5 grid

- >In general, the number of floating plastics becomes smaller while leaving the Asia Continent, reflecting that their source must be human activities.
- >The number of floating pollutants in the seas adjacent to Japan is larger than that in the south of 20°N and the subarctic region.
- >Relatively many floating plastics are found around 30°N, south of the Kuroshio and the Kuroshio Extension.

Oceanic current [Geostrophic flow] and Ekman drift/transport [Wind-driven]

### Time series of floating plastics



- Recent several years, observed floating plastics are less than 10 pieces/100km all over the western North Pacific.
- As for the seas adjacent Japan, floating plastics have been decreased after the peak of 1988-1990.
- The tendency of increasing, however, can be found after 2000.

### JMA webpage – Marine Diagnosis Report-



Information on the marine pollution in the western North Pacific is open to the public

JMA Top:

<http://www.jma.go.jp/jma/index.html>

Marine pollution in the western North Pacific:

<http://www.data.kishou.go.jp/kaiyou/shindan/>

(only in Japanese)

Thank You!!