

# JAPANESE CONTRIBUTION TO THE WORLD DATA CENTER FOR OCEANOGRAPHY

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## ABSTRACT

*The Japan Oceanographic Data Center has been submitting oceanographic data to the World Data Center for Oceanography through the framework of the International Oceanographic Data and Information Exchange Committee sponsored by the UNESCO/IOC. In the World Ocean Database 2009, which is the compiled database of the WDC for Oceanography, the Japanese contribution has reached about 16% of the total. Japan is one of the main data suppliers for the WDC for Oceanography. JODC would like to continue to contribute to the World Data System with the WDC.*

**Keywords:** World Data Center, World Data System, Oceanography, Data management, International Oceanographic Data and Information Exchange

## 1 INTRODUCTION

The Japan Oceanographic Data Center (JODC) was established in the Hydrographic Department, Maritime Safety Agency (at present the Japan Coast Guard) in 1965 in accordance with the resolution adopted by the Intergovernmental Oceanographic Commission (IOC) of UNESCO in 1961 as well as the reports of the Council for Marine Scientific Technology in 1963 and 1964. Since its establishment, the JODC fulfills the role of the synthetic marine data bank of Japan in the collection of marine data obtained by various marine research institutes and organizations located in Japan and in providing users with these data. (Michida, 1997)

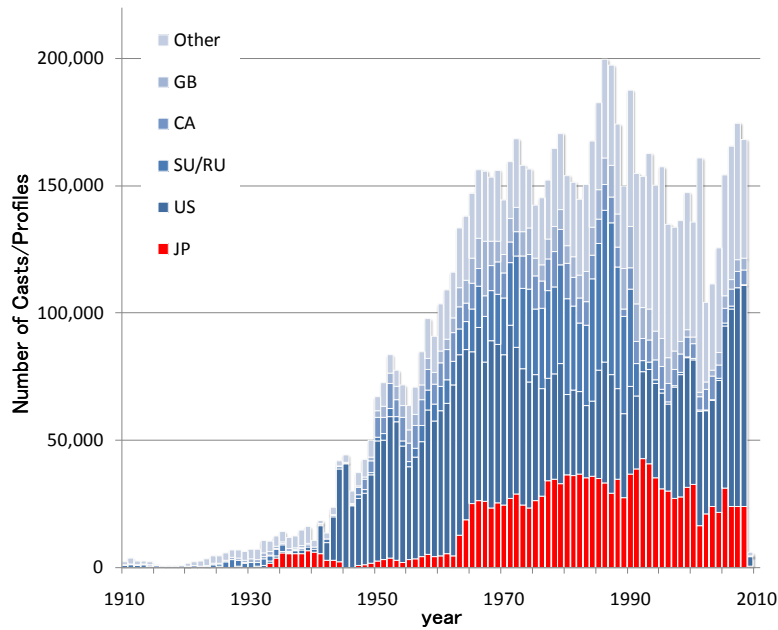
The JODC also submits oceanographic data to the World Data Center for Oceanography (WDC-A; Silver Spring, NOAA) as the National Oceanographic Data Center of Japan under the framework of the International Council of Science (ICSU) and the International Oceanographic Data and Information Exchange (IODE) Committee of the UNESCO/IOC.

## 2 JAPANESE CONTRIBUTION TO THE WORLD DATA CENTER

The data that is submitted to the WDC through the IODE framework are compiled as the “World Ocean Database (WOD)” by NOAA. In WOD09, the most recent version of WOD released in September 2009, the Japanese contribution reached about 16% of the total (Boyer et al., 2009). That is the second largest contribution by a nation next to that of the United States. With respect to the number of ocean station data (OSD) that include low resolution CTDs and XCTDs, the Japanese contribution has reached more than 20 % (Table 1). The number of stations submitted by Japan has been at a constant level of around 30,000-40,000 per year since 1965 when JODC was established (Figure 1).

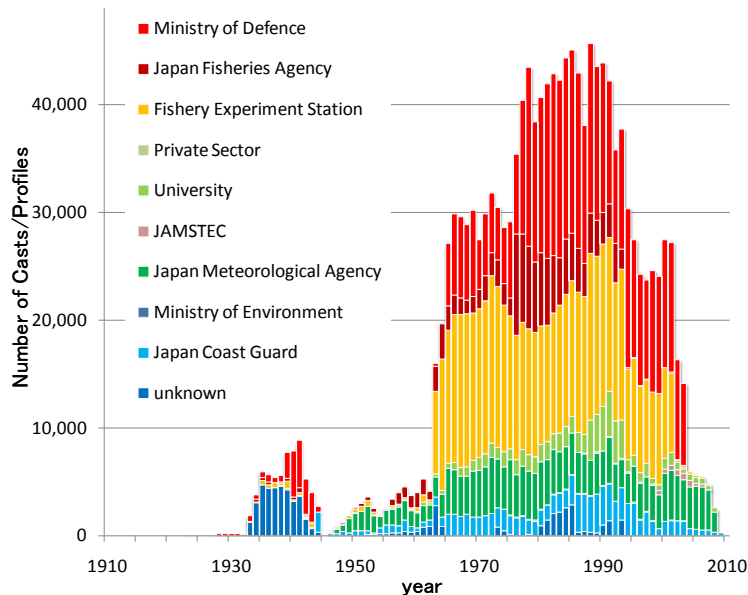
**Table1.** Comparison of the contributions to the WOD09

Country (ISO code)	United States (US)	Japan (JP)	Russia (Soviet Union) (RU, SU)	Canada (CA)	United Kingdom (GB)	Other	Total	% of total of Japan
Total	3,253,194	1,413,011	1,064,316	534,522	509,298	2,176,398	8,950,739	
(OSD, included)	(374,130)	(541,722)	(577,877)	(119,815)	(130,297)	(797,457)	(2,541,298)	21.3%
% of total	36.3%	15.8%	11.9%	6.0%	5.7%	24.3%		



**Figure 1.** Time series of the number of station data by country

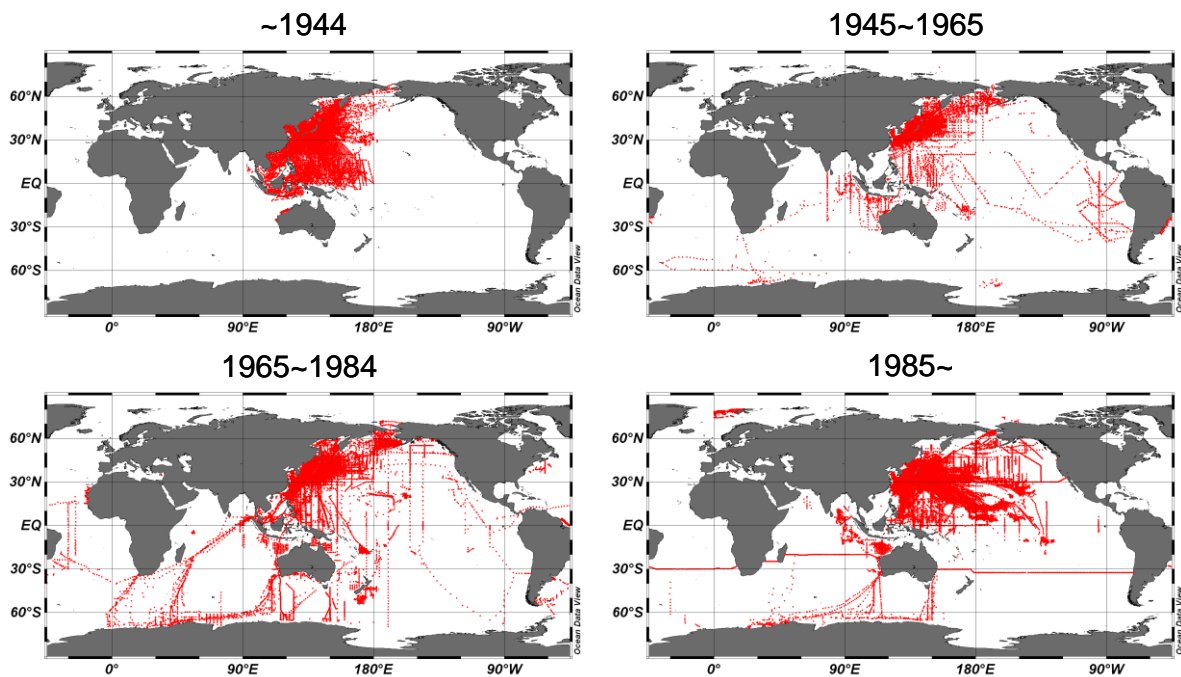
Figure 2 shows the breakdown of Japanese organizations that submitted data to the WDC through the JODC. The oceanographic surveys that were carried out by the Fisheries and Defense agencies occupy the majority of the total. The data collection framework in Japan is based on voluntary participation. The JODC has a “Domestic Coordinating Committee” that meets every year in order to collect data efficiently and to exchange information about survey plans. This allows for effective cooperation in the exchange of data and information.



**Figure 2.** Time series of the number of Japanese station data submitted by the JODC

The JODC also initiated contributions to the IOC/IODE Global Oceanographic Data Archaeology and Rescue (GODAR) project (Levitus et al., 2005) with the goal of locating and rescuing oceanographic data that is at risk of being lost due to media decay. Results of this project are also reflected in the WOD. A significant amount of historical Japanese data is included in the WOD. Over half of the data collected before 1945 is currently used in the WOD (Figure 1).

Figure 3 shows the historical transition of Japanese OSD data distribution. It indicates that Japan carried out many marine surveys, mainly in the Western Pacific, before 1945. After 20 years of these geographically limited survey activities, the OSD data obtained by Japanese surveys began to be acquired from a much broader area of the world ocean.



**Figure 3.** The transition of Japanese OSD data distributions every 20 years

### 3 FUTURE PERSPECTIVES

In March 2011, the IODE adopted a statement with respect to the role of the IODE in the World Data System (ICSU/WDS) in its 21st session. In this statement, the IODE expressed its strong interest in sharing data and information with the WDS. The JODC, as one of the national oceanographic data centers of the IODE, intends to continue to contribute to the WDS with WDC.

### 4 REFERENCES

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