Collection of relevant scientific data

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Executive Summary

The Republic of Korea's report outlines, "*inter alia*: actions undertaken to address the effects of climate change on the oceans, in particular, with regard to (i) collection of relevant scientific data," in response to the request of the Office of Legal Affairs of the United Nations detailed in its note of 16 December 2016, LOS/SGR/2017. The Report consists of data collected from two sources: 1) ile

Report

1. NIFS (National Institute of Fisheries Science)

Since 1961, NIFS (National Institute of Fisheries Science) has carried out the Korea Serial oceanography Observation (KSO) using the Research Vessels (RVs). This consists of 25 lines and 207 stations in Korean waters. The observations have usually been carried out six times a year and measured temperature, salinity, dissolved oxygen, zoo- and -phyto- plankton, nutrient, oceanic meteorological factors and so on. The observations aim to provide information about fishing ground conditions around the Korean Peninsula and accumulate scientific data related to climate change in the East Asian Marginal Seas. The results of KSO are officially used to analyze the impact of climate change on Korean waters. The long-term trend of sea surface temperatures in Korean waters showed an increase of 1.11 during the last 48 years from 1968 to 2015. This is 2.5 times higher than the increase in global mean sea surface temperatures, which is approximately 0.43 , during the same 48-year period. The reasons for the higher increase in the surface temperature of Korea waters are believed mostly to be the marine features of the semi-closed ocean area, effects of long-term changes of Siberian High and Pacific Decadal Oscillation (PDO), and the effect of the Tsushima Warm Current. On the other hand, salinity slightly decreased by 0.29 psu during the last 48 years from 1968 to 2015. It is estimated that the reason for the trend towards decreasing sea surface salinity in Korean waters is the effect of changes in the Changjian Diluted Water.

2. KHOA (Korea Hydrographic and Oceanographic Agency)

The Korea Hydrographic and Oceanographic Agency (KHOA) operates the real-time Korea Ocean Observing

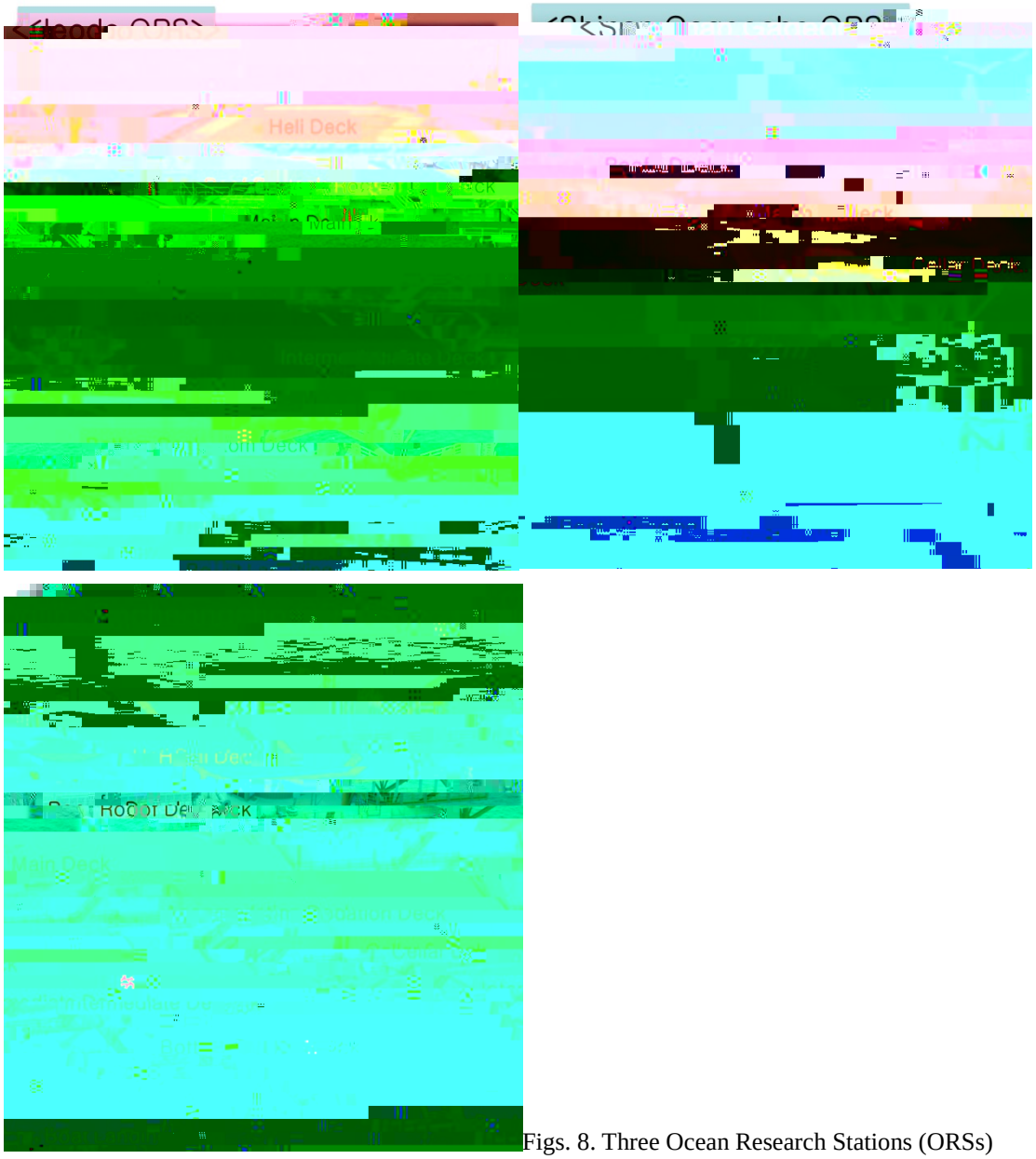
Fig. 2. Tidal Station (Busan) operated by the KHOA. Fig. 3. Mean Sea-level (MSL) trends at the Korea coasts.

Fig. 4. Mean Sea-level trends at 18 tidal stations.

3 Ocean Stations are fixed offshore facilities (Figs. 1 and 5). Offshore wave data are mainly provided. 30 Ocean Buoys (anchored) consist of ocean observation sensors, telecommunication equipment, .

Fig. 5. Ocean Station

(http://www.khoa.go.kr/koofs/eng/observation/obs_real.do). .



Figs. 8. Three Ocean Research Stations (ORSs)

References

KHOA (2015), Analysis and Prediction of Sea Level Change. KHOA report.