

The time trend of lead pollution agreed with the history of the economic growth of Japan after the Meiji restoration, and the lead contamination of Osaka Bay rapidly increased from the Russo-Japanese War (1904–1905) by the high economic growth period after the World War II clarified. The lead pollution tended to decrease recently, because it was well controlled by legal restrictions and improvement on the processing technology of industrial waste including the pollutants. The flux anomaly in 1980's coincided with the period while the Kansai Airport was constructed.

References

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Variation of SST in the eastern coastal sea induced by strong marine wind under the development of coastal low pressure

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The variation of sea surface temperature along the eastern coast of Korea under the influence of strong marine wind was investigated from March 28 through 30, 2004, using SST satellite pictures and a three-dimensional numerical model, MM5, version 3.7. By the meteorological model meteorological elements-wind and air temperature with a 3 km, 9 km and 27 km horizontal resolutions were reproduced in the mountain, coastal and open seas. As supplementary materials, QuickSCAT wind data was also used for analyzing marine wind in the East Sea. The comparison of evaluated meteorological elements by the numerical model with observed ones was carried out at Gangwon Regional Meteorological Administration. NOAA MCSST satellite pictures were used for the analysis of daily mean SST variation affected by coastal wind. Winds evaluated at every 9 km horizontal interval using MM5 meteorological model and winds at a relatively wide horizontal interval from QuickSCAT was very similar each other. On March 28, as westerly wind under high

pressure system prevailed in the Gangneung coast and the open sea and wind driven current could be southward and resulted in cold water intrusion of the North Korea Cold Current toward the southward. Under this situation, the cool water was intruded from the north toward south along the coastal sea and sea surface temperatures (SST) along the coastal sea under the influence of the North Korea Cold Current was 11°C. On March 29, westerly wind by low pressure system produced the southwesterly marine surface wind, which could induce a strong southeastward wind driven current and results in the intrusion of cold water from north toward south along the coast. On March 30, low pressure system was developed with the decrease of 5 hPa from 1013 hPa to 1008 hPa, and the pressure pattern induced northerly wind along the coast and westerly wind in the offshore, resulting in cold water intrusion from the northern coast into southeastern sea. On this day, sea surface temperature near Gangneung coastl sea was 9°C. Northerly and westerly wind made further extension of cool water area toward the eastern open sea. This work was funded by the Korea Meteorological Administration Research and Development Program under Grant CATER 2006-2308 □ Generation mechanism and prediction of windstorm in the mountainous coast □ for 2006 ~ 2008.

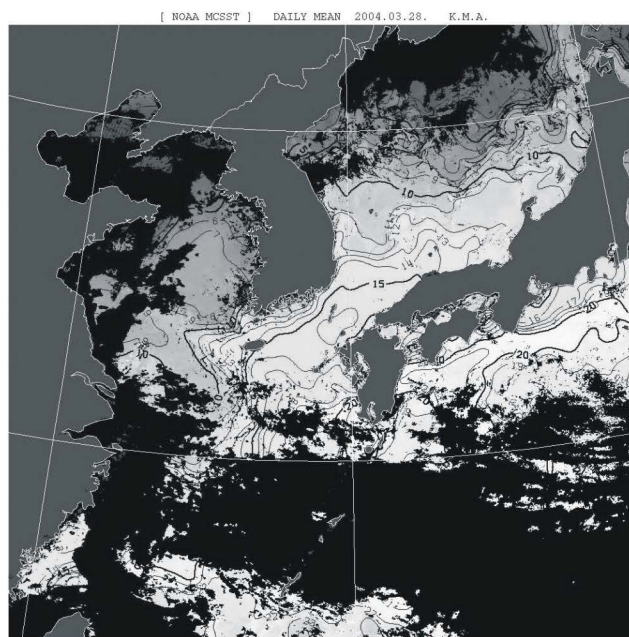


Fig. 1 SST on March 28, 2004

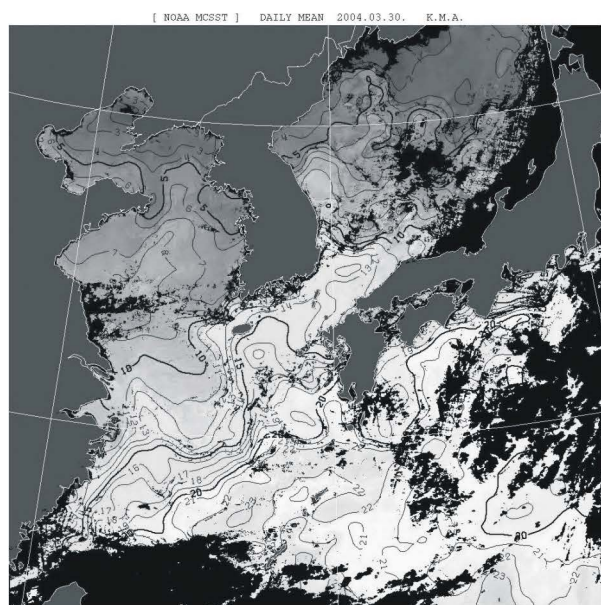


Fig.2 SST on March 30, 2004

Mediterranean protocol on integrated coastal zone management: innovative tool for regional governance

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The Ministerial meeting of the Contracting Parties to the Barcelona Convention adopted in 2003 a recommendation to draft the text of the regional protocol on Integrated Coastal Zone Management. Protocols are legal instruments for the implementation of the Barcelona Convention and they deal with specific thematic issues. Currently, there are six protocols in force (specially protected areas; land based sources of pollution; hazardous substances; oil pollution from ships; etc.). The Protocol has been signed in Madrid, Spain on 21 January 2008 by 14 Contracting Parties to the Barcelona Convention. It is expected that, within a year, the Protocol will be signed by the remaining 8 parties as well as enter into force.

Currently, similar institutional and legal arrangement could not be found in any of the world regions. European Union has adopted the ICZM Recommendation in 2001, being short, thus, of adopting a directive, which is a standard EU legal arrangement. This is proof that regulating ICZM at a regional level is an extremely difficult task, and requires parties to be highly committed to implement it. Mediterranean countries have

shown such courage. Many believe that this is the most important ICZM legal event since the adoption of the US CZMA Act in 1972.

The main objective of the protocol is to enhance legal capacity of the Mediterranean countries to regulate coastal development on a sustainable basis, and to assist countries in reducing development pressures in coastal areas of the region (tourism, urbanization, industry, transport, fish farming, etc.). The Protocol is very innovative in its endeavors; it is comprehensive, since it covers all important coastal issues, notably the impacts of climate change and other natural risks in coastal areas of the region; it is proactive; and integrated, since it is bringing together all pending coastal issues.

In the presentation, major activities will be outlined. First, the Feasibility Study was prepared. It proposed a legal document that is stricter than EU ICZM Recommendation, but not strict enough to hamper its adoption and implementation. The first draft of the text was prepared by a working group of legal and technical experts. It was discussed at several forums by a large number of regional stakeholders. In 2005, Contracting Parties decided to establish a Working Group of Experts to finalize the text. It met 5 times. The group worked gradually towards a commonly acceptable text. In the presentation, the difficulties encountered in the negotiation process will be exposed, as well as ways and means how these disagreements were sorted out. It will end with the presentation of the benefits which this innovative regional legal instrument will bring to the Mediterranean coastal areas and their population in the future. The text of the protocol will be presented as well as the guidelines for its implementation.

Land-ocean interactions in the coastal zone (LOICZ) a joint core project of IGBP and IHDP

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LOICZ is an international research project involving scientists from across the globe who have been investigating changes in the biology, chemistry and physics of the coastal zone since 1993. Since 2003, LOICZ has expanded its areas of research to include social, political and economic sciences in order to address the human dimensions of the coastal zone. The research