

The bathymetry data development in the coastal zone, it is an object of the urgent in tsunami disaster

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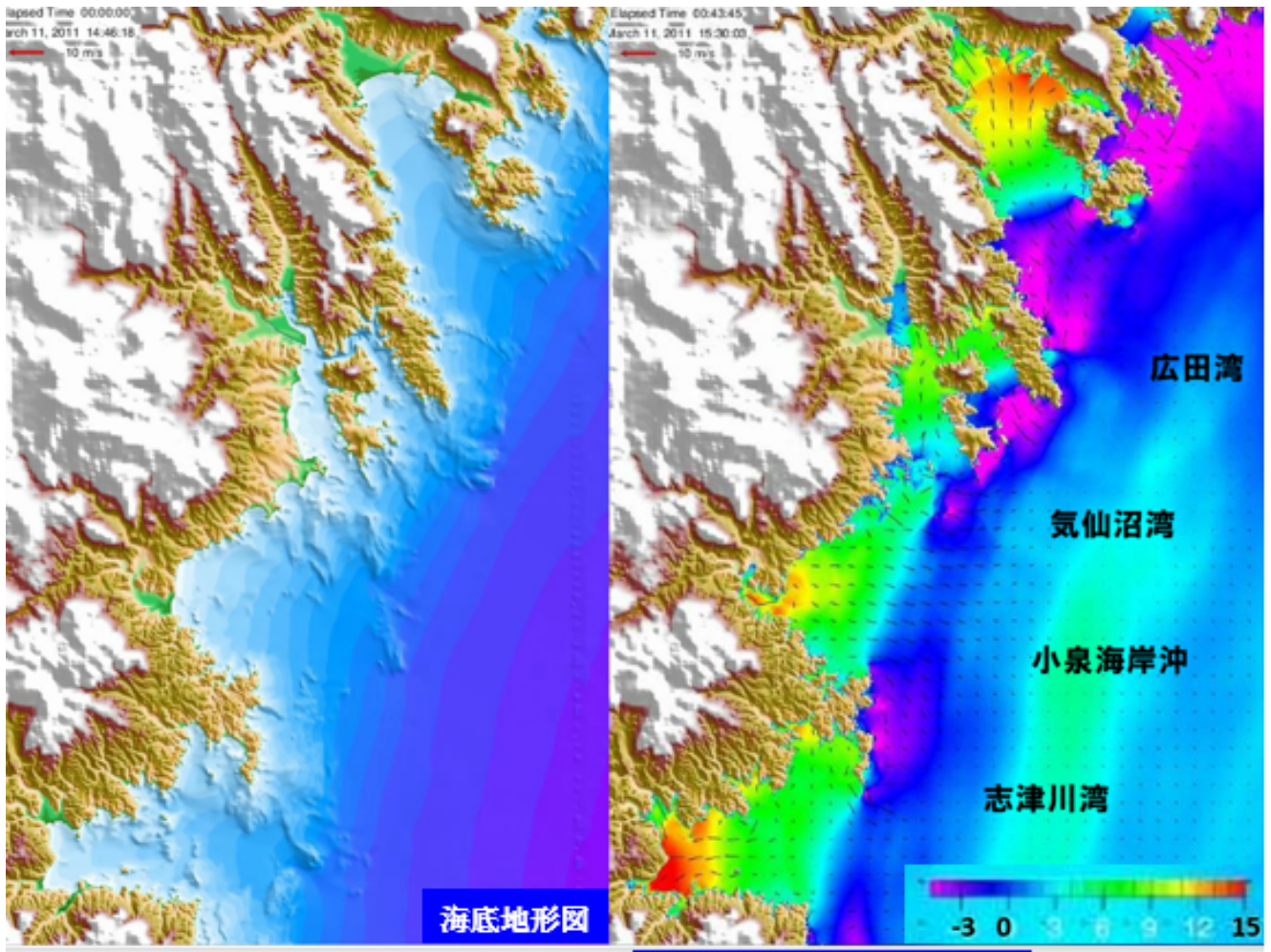
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2011 Tohoku tsunami struck the Tohoku region coast facing the Pacific Ocean. There was no big difference in the tsunami height recorded in the offshore GPS wave meter, but a clear difference appeared in each tsunami height that struck the coast. As the tsunami gets close to the coast, the height changes suddenly.

Although the tsunami is a huge disaster, its information is extremely low because it is of low frequency. It is a powerful means of estimating tsunami by numerical calculation to compensate for it. Since the progress, concentration, and dispersion of the tsunami depends on the topography of the ocean floor, it is important for the calculation that the topography accuracy is guaranteed.

As an example of the difference in the amplification characteristics of the tsunami due to the difference in the topography of the ocean floor, the examination results of the Sanriku coast at the 2011 Tohoku Tsunami are shown. Kesenuma Bay and Hirota Bay are adjacent bays. However, the height of Rikuzentakata city tsunami reached nearly three times that of Kesenuma city area. This is the effect of the ocean bottom topography. Tsunami simulations have been conducted throughout the country, and the results are announced. However, the topographical data of the sea area, which is the basis of the calculation, has extremely small amount of information compared to the land area. Maintaining topographical data of coastal waters at the national level is a matter of focus for tsunami disaster prevention.

Keywords: bathymetry data, coastal zone, tsunami disaster



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