Press Release



10/2015

Sea level rise: More data from the oceans ne eded Climate scientists from Kiel show how regional predictions can be enhanced

16 March 2015/Kiel. How quickly sea level will rise in the next 100 years can be roughly calculated on a global scale. However, for specific coastal -protection measures, you do not need a global average; y ou need to know how sea level will actually rise at a particular coast. The regional sea level rise may be quite different from one region to another. Climate scientists f rom GEOMAR Helmholtz Centre for Ocean Research Kiel have now show n in Nature Climate Change that reliable of

c Centre for Ocean Research Kiel. Changes in various currents and wind ame for these regional differences, but also the fact that temperatures on Earth g rates. Therefore, global averages are only of limited use when it comes to tection. In a study, published in Nature Climate Change today, a group of om GEOMAR and the University of Isfahan (Iran) shows that a reliable I sea level trends based on today's oceanic database is very difficult. "Our for more ocean measurements," says Professor Latif, initiator of the study.

authors used the Kiel Climate Model (KCM), which simulates the ocean, the sea ice. First, they simulated a control climate of 3,000 years with the KCM. states from that control run and performed global warming simulations by them the concentration of carbon dioxide (CO

2) at a rate of 1percent per year,

approximately corresponding to present rate. Thereafter, the scientists evaluated 100-year trends in sea level at each point and their regional variations.

"The change in CO_2 was the same in each of the global warming simulations. Nevertheless, regionally, the sea levels evolved rather differently d

