

Interactive comment on “Operative forecast of hydrophysical fields in the Georgian Black Sea coastal zone within the ECOOP” by A. A. Kordzadze and D. I. Demetrashvili

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We would like to thank you for reviewing of our paper and your comments. We provide below our replies to your 3 comments.

Comment 1. Authors use the term nesting. But, they did not give any explanation what they mean with nesting. They actually gets the fields from basin scale model and interpolate to their grid to initialize their model. This is not nesting. They have to correct this. They have to describe what are the boundary conditions used?

Response. After finishing of calculation of forecast from Basin-scale model (BSM) of MHI (Sevastopol/Ukraine) all needed data for regional forecasting are placing on

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special ftp site which is available for us. These data consist of hydrophysical fields and meteorological fields over the Black Sea. The received hydrophysical fields we use not only to initialize model, also as open boundary conditions for our regional model. Before using the open boundary conditions we interpolate them from the course grid of BSM to the fine resolution grid of the regional model. This procedure is made after each time step during integration. All input data we have with 1 hour time step frequency within the 4 days' period of integration. Thus, we use nonstationary open boundary conditions, which represent forecast of velocity components, temperature and salinity from BSM of MHI. The open boundary conditions provide information to be passed from the BSM model with coarse grid to the regional high-resolution grid model. Probably, in the article we did not describe all this procedure clearly, in a new revised version we will give a better discussion of this question.

Comment 2. The model results were not validated. Although, authors acknowledged this problem in two places in the paper, there is a need to show that the skill of the model in forecasting the fields. Even if they do not have in-situ data, satellite observations will help.

Response. Really we were not able to validate model results by comparison to measured data, so we have performed detailed comparison with the BSM model outputs. By-turn the BSM of MHI is validated using data from drifting buoys and profiling floats (Korotaev et al (2006)). Besides, our regional model was validated during pilot experiment on functioning of the Black Sea Nowcasting/Forecasting system in 2005 (please see Korotaev et al (2006); Kubryakov et al (2006)). Despite this fact, we agree with you that there is a need to compare results of forecast with in-situ or satellite data. We hope to find such data and to include comparisons between model and real data in a new revised version of the article.

Comment 3. In the title of the paper, it says " Operative forecast of ...". I do not understand what operative forecast is. If they mean operational forecasting, they should give technical details like; how did they get the data from basin scale model in real time,

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what are the operational forecast protocols they followed etc.? Ä'sn the present form, it looks like ahinscasting study.

Response. We agree with you concerning title of the paper. A title of the new revised version of the paper will be "Forecast of hydrophysical fields in the Georgian Black Sea coastal zone within ECOOP". In addition, we would like to inform you that we every day receive all needed input data to calculate regional forecasts via ftp site from Marine Hydrophysical Institute (Sevastopol, Ukraine). At present our regional forecasting system is practically ready for operational functioning and we are planning to place results of 3 days' regional forecasts every day in Internet in the nearest future. Kind regards,
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