**Ocean Science
Discussions**

Interactive comment on "Black Sea coastal forecasting systems" *by* A. I. Kubryakov et al.

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Dear Anonymous Referee,

First of all, thank you very much, that you have taken the trouble to read our article. We try to answer on all your notes and recommendations and we hope that the manuscript will be better after the revision: 1) "Introduction lacks any description of Black Sea and/or its coastal regions. Although it is mentioned that coastal regions cover regions of big ports, river influence areas and recreational areas, oceanographic/environmental background is not presented. For example, term "Rim Current" used later should be introduced here with proper references."

We are grateful for this comment. And while the paper is primarily intended for the Black Sea scientific community which is familiar with the geographic and oceanographic background, we will extend the description of the Black Sea geography and

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the most important features of the Black Sea dynamics.

2) " The names appearing in the text (like Crimea, Danube etc) are not presented in the ïňĄgures." We will take this technical correction into consideration preparing revised manuscript.

3) "Figure 1 is not necessary, since the "pilot system" has been published earlier and the result from this system are not presented in the paper."

We present this figure to demonstrate the development of our system. This figure shows that a significant upgrade was carried out, both geographically and technically.

4) "Physical part of the models is somehow described (POM is a well-known model), but principles of the ecosystem model are not given. It is not enough say that "model extends to 200m depth with 26 z-levels, compressed to the sea surface. It includes 15 state variables: : :/list follows/: : :".

The detailed description of the model is given in the same journal: Development of Black Sea nowcasting and forecasting system. - G. K. Korotaev, T. Oguz, V. L. Doro-feyev, S. G. Demyshev, A. I. Kubryakov, and Yu. B. Ratner. Ocean Sci., 7, 629-649, 2011 and we will make corresponding reference to this article.

5) "Subtitle 3.2 "System products" does not agree with the following text: it presents some examples of products together with oceanographic interpretation. If interpretation will be kept in the ïňĄnal text, then I would like to see references how these ïňĄndings agree with earlier results."

As specified in the paper, products of whole system are forecasts of three-dimensional fields of temperature, salinity and current on different depths at the all five considered coastal regions. In our paper the pictures are presented only for three regions with description of more interesting physical features. The results for the coastal region near the Georgia are presented in the paper of our Georgian colleagues in the same journal: Operational forecast of hydrophysical fields in the Georgian Black Sea coastal

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zone within the ECOOP. - A. A. Kordzadze and D. I. Demetrashvili. Ocean Sci., 7, 793-803, 2011. Description of results for Russian coastal zone is planned in the paper of our Russian colleagues. And following to the recommendation of Referee we will make corresponding references.

6) "Fig. 3 and explaining text should be moved into subchapter 3.2, together with examples from physics. Labels in Fig. 3 are not visible"

We agree with this note and we are going to do corresponding corrections.

7)" Statement "This narrow jet of the cold water along the western coast of the Black Sea is often observed on the satellite infrared imagery in winter time" (p. 1061) requires reference. " We will provide necessary references.

8) "Sentence "Four days forecast demonstrate complex mixing.." (p 1061): where the "four days" come from, the system produces three days forecast?"

Thank you for this note. It is correctly four days calculation, because we every day we start calculations a day before to spin up and then three days forecast. We will correct this sentence.

9)" Fig. 6 is split now into a and b, but the text refers to one composite ïňA̧gure." You are right, we have to write "Fig. 6a" on lines 13 and 15, and "Fig. 6b" on lines 19 and 24 of page 1061. Of course, we agree with this technical corrections.

10) "Page 1062 presents information about Bulgarian measurements, but I was not able to ïňA̧nd where these measurements are analyzed and presented. Figs. 8 and 9, giving locations of non-used measurements, should be deleted."

We are not going to analyze and describe the measurements data in this paper. We only use these data for validation of model results. So we believe that we should introduce a reader what kind of in situ data we used and in what areas. Therefore, the article provides information about time and location of oceanographic surveys. This information is important in describing the validation procedure.

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11) "Abbreviations like ECOOP, EuroMISS, OpenDAP etc are not explained and/or referenced. Abbreviation of participating institutions are not explained sequentially"

We will introduce to the paper explanation of all Abbreviations.

Once again, we hope that the article would be more attractive after revision.

Interactive comment on Ocean Sci. Discuss., 8, 1055, 2011.