

Interactive comment on “Black Sea coastal forecasting systems” by A. I. Kubryakov et al.

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Dear Anonymous Referee, We very appreciate your taking the trouble to read our article. We try to follow all your recommendations and we hope that the manuscript will be better after the revision: 1. “In the introduction the state of the art in coastal forecasting systems should be described more detailed by referencing the important efforts undertaken by others.”

We are grateful for this comment. It should be noted that our system is the first and only forecasting coastal system for the Black Sea and we can and will extend the introduction by referencing the important efforts undertaken by others for the other seas.

2. “The simulated regions in Figure 1 are described within the Kubryakov et al paper from 2006 and no results are presented here, so that should only be referenced or if

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wished to be included in the actual manuscript incorporated in Fig 2. The regions referenced in the text should be clearly marked in the specification figures, otherwise it is difficult to identify the specific region. That would improve also the identification of areas in the validation part of the manuscript.”

We present two figures with coastal zones to demonstrate the development of our forecasting system, so a reader can directly see from these figures that a significant upgrade has been carried out, both geographically and technically. We will mark the presented zones by numbers or signs to identify the specific regions.

3. “While the POM model (original citation should be incorporated) is well known and therefore the description provided is sufficient, the model developed by the Institute of Geophysics in Georgia is less well known and at least its principles should be introduced by at least a short paragraph or an appropriate citation should be included”.

The model of the Institute of Geophysics in Georgia is presented in the paper of our Georgian colleagues in the same journal: Operational forecast of hydrophysical fields in the Georgian Black Sea coastal zone within the ECOOP. - A. A. Kordzadze and D. I. Demetrashvili. Ocean Sci., 7, 793-803, 2011. We will include the appropriate citations about POM and Georgian models.

4. “The basic principles for the Ecosystem part used within this study are not sufficiently described. Here either appropriate citations or a comprehensive description is necessary to include”.

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

5. “All claims named in the text must be proved by references”. We are quite agree with you and we will try to include all necessary references.

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6. "It is named that all the models are carefully calibrated against observations, but no description/referencing of this data that is available for that effort and that is seen as of crucial importance to be provided prior to final publication. Another question is the period used for calibration". We did not aim to analyze and to 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. We agree with you just this information is important in describing the validation procedure. In Section 4 we indicate what data were used for validation: they are SST from NOAA AVHRR data and archived data, and oceanographic surveys salinity and temperature data obtained by R/V "Eksperiment" and R/V "Akademik". Time periods of cruises and number of stations are presented in the tables 1-3, surveys location is presented on the figures 7,8. At the last paragraph of Section 4 remote sensing data are described. Therefore, the article provides information about time and location of oceanographic surveys.

7. "All Abbreviations used within the text and figures, should be explained resp data sets should be referenced correctly (EuroMISS, NOAA etc.)".

We will introduce to the paper explanation of all used Abbreviations.

8. "Inconsistencies between the forecast description (one day hindcast and three day forecasts) compared to the products description (four days forecasts) must be avoided!"

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. "The quality of the product example figures is very low. Prior to the final publication all the important features must be clearly seeable and labels must be readable for all the figures".

We agree with this note and we are going to do corresponding improving on pictures.

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10. "Inconsistencies between figures and description of figures must be avoided!"

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.

11. "By reading this manuscript separated from the rest of the special issue that ECOOP is aiming for, it appears to be desirable to include at least a short general description of the concerted validation approach applied within the ECOOP project. It would be valuable to discuss the application of common tools for the validation and publication of the validation results".

The model validation system for the Black Sea to provide model confidence has been developed for model confidence diagnosis, definition of a quality controlled validation database structure from distributed data centres and common protocol to calculate standard validation criteria of ECOOP project. This system is described in the mentioned above article "Development of Black Sea nowcasting and forecasting system. - G. K. Korotaev, T. Oguz, V. L. Dorofeyev, S. G. Demyshev, A. I. Kubryakov, and Yu. B. Ratner. Ocean Sci., 7, 629-649". We will introduce the appropriate reference to our manuscript.

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

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

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