Supplement to:

BPOP model: exploring the impact of changes in the biological pump on the shelf sea and ocean nutrient and redox state

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BPOP model: user's manual

The BPOP model has been uploaded as a supplement to the overmentioned publication as a zip file and is available for download.

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BPOP was developed using Matlab R2018b and runs on a single core.

The model consists in 3 Matlab files:
the main file that calls the equations (*run_BPOP_LOOPzrem.m*), the file containing the set of equations to integrate (*eqn_BPOP_LOOPzrem.m*), and the file containing the list of parameters (*param_BPOP_LOOPzrem.m*).

In this version, the main file is set to run the model for varying z_{rem}^{S} and z_{rem}^{L} by looping in a user defined interval of discrete values. By running the main file, the equations are integrated for each couple of z_{rem}^{S} and z_{rem}^{L} defined by the chosen interval.

The main file saves the entire set of final values of the state variables and diagnostic fluxes calculated in the 2D space of the chosen values of z_{rem}^{S} and z_{rem}^{L} in a *.mat* (Matlab data) file.
The file also contains the names and units of the saved variable and fluxes.

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We provide an additional file (*plot_LOOPoutput.m*) with an example of how to plot some of the model output in the 2D space of z_{rem}^{S} and z_{rem}^{L}.

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