Simplified flood analysis system for hazard map using geographic information

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We developed Earth Dam Flood Analysis, which has two functions; one is to hold data on the server and able to analyze on the website, the other is to furnish necessary data with CDs and enables to analyze on the every terminal. There have been some flood analyses, and have been used for daily business. But this Earth Dam Flood Analysis has features of enabling to analyze data easily and to show the results simply. Though it is necessary to buy the geographic data, this software is to be supplied free to public institutions. The procedure of Earth Dam Flood Analysis is as follows.

1. Select the rectangle area of analysis for flood on the web gis. If you do so, the preface of the earth dams, graphics data of the analytic area, numeric map data (one twenty five thousandth), and digital elevation data (10m, 1.5m mesh) are called up from the database of earth dams, and data set for the analysis is prepared.

2. The flood analysis using Shallow water equation is performed, with set defaults such as Coefficient of roughness of the basin, etc.

3. The output of the result of the flood analysis is performed. And the file is output.These are automatically done in the program thus far. After this, the results of time series are shown, such as maximum water depth and maximum water-flow velocity. You can decide the area where heavy damage is anticipated.If you use the stand-alone type, before the procedure 1, please read the necessary data through the CD. And you can get the data allocation automatically. The other procedures are the same.

Add-up and Future

Recently geographical information was improved and the useful application is desired. Though the existing GIS system is very functional and useful, it seems to require considerable experience for data entry and output of the results. Earth Dam Flood Analysis in this report enables for inexperienced engineers to perform the advanced flood analysis, and makes it easy to use more the geographical information.