

**Minutes of the meeting for presentation on a technical session of 'Sediment prediction and morphology model for the Package no. BWDB-C15: Development of Hydrological Services Products such as Sediment Prediction & Riverbank Erosion, Hyd. Drought Prediction, Salinity Intrusion Forecast, Ground Water Outlook and Forecast, Surface Water Supply Outlook etc. And Upgrade of Existing Website to Display Real Time Data, Products & Warnings in connection with the project BWCSRP Component-B: SHEWS, BWDB, Dhaka.**

A discussion on Draft Final Report of the subject mentioned study was held on 26 December, 2023 at 12:00 pm in the conference room of Additional Director General (Planning, Design and Research), Level-5, Pani Bhaban, 72 Green Road, BWDB, Dhaka. The meeting was presided over by Mr. A. K. M. Tahmidul Islam, Additional Director General (Planning, Design and Research), BWDB. A list of participants is attached in the Annexure-1. Upon welcoming the participants Additional Director General (ADG) (Planning, Design and Research) opened the meeting. He requested the Project Director, BWCSRP Component-B to introduce the agenda of the meeting. Mr. Mashieur Rahman, Project Director, BWCSRP Component-B, extended welcome to the participants and asked Dr. Ahmadul Hassan, the Team Leader (TL) of the package, for initiating the detailed presentation. Then, the following discussion was carried out on sediment prediction and morphology model.

| Sl. | Discussion   | Recommendation   | Remarks |
|-----|--|--|---------|
| 1.  | Concerns were raised in the meeting about the analytical solution by Universal Bank Erosion Coefficient (Hasegawa, 1989) of riverbank erosion which is applicable on meandering river and dominant hydraulic parameter of the method is excess velocity which is governed by secondary flow in meandering channel. But in braided river like Brahmaputra-Jamuna bank erosion is mainly governed by shape and location of sand bar. | The consultant will attempt further together with a view to improve the model result and to finalize the draft final report clearly highlighting the model limitations, assumptions and recommendations to overcome the raised issues in future, and a clear way out to reach to the stakeholders with a reliable prediction. A simple and quick assessment tool based on hydrological data/information in an excel sheet for the prediction of river bank erosion will be incorporated in the final report of the package which may be useful for BWDB in the future. |         |
| 2.  | Discussions took place in the meeting about the model generated result (after the monsoon) as the model cannot predict all the erosion at both sides of the riverbank. It was asked whether the passive bathymetry (remote sensing based) or the actual cross section measured by BWDB was used in the Delft3D numerical model.  | Additional measurement data of discharge and sediment maybe incorporated in the model to improve accuracy. On this context model performance is to be shown in the report.   |         |

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| 3. | It was asked whether the model is ready to disseminate the result to the users/stakeholders. | The prediction model should be simulated at least 2-3 years for better prediction before disseminating the result to the community level. |  |
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As there were no further discussions, Mr. A. K. M. Tahmidul Islam, Additional Director General (Planning, Design and Research), BWDB closed the meeting by expressing his gratitude to the attendees.

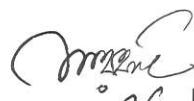
  
**(A. K. M. Tahmidul Islam)**  
 Additional Director General  
 (Planning, Design & Research)  
 BWDB, Dhaka.

Memo No. WCS/C-15/ 8794

Date: 26/12/2023

**Distribution (not as per seniority)**

1. Additional Director General, Office of the Additional Director General, West Region, BWDB, Pani Bhaban, Dhaka.
2. Chief Engineer (Hydrology), Hydrology Building, BWDB, 72 Green Road, Dhaka.
3. Director, Ground Water Hydrology, BWDB, 72 Green Road, Dhaka.
4. Superintending Engineer, Directorate of Planning-1, BWDB, Pani Bhaban, Dhaka.
5. Superintending Engineer, Processing and Flood Forecasting, BWDB, 72 Green Road, Dhaka.
6. Superintending Engineer, Surface Water Hydrology Circle, BWDB, 72 Green Road, Dhaka.
7. CSO to the Director General, BWDB, Pani Bhaban, Dhaka.
8. Senior System Analyst, ICT, BWDB, Pani Bhaban, Dhaka.
9. Executive Engineer, BWCSRP Component-B: SHEWS, Pani Bhaban, Dhaka.
10. Executive Engineer, Flood Forecasting and Warning Center, BWDB, Pani Bhaban, Dhaka.
11. Programmer, BWCSRP Component-B: SHEWS, Pani Bhaban, Dhaka.
12. Sub-Divisional Engineer, BWCSRP Component-B: SHEWS, Pani Bhaban, Dhaka.

  
 26/12/2023  
**(Mashiur Rahman)**  
 Project Director,  
 BWCSRP Component-B: SHEWS  
 BWDB, Dhaka.

**Minutes of the meeting for presentation on a technical session on 'Hydrological drought prediction model' for the Package BWDB-C15: Development of Hydrological Services Products such as Sediment Prediction & Riverbank Erosion, Hyd. Drought Prediction, Salinity Intrusion Forecast, Ground Water Outlook and Forecast, Surface Water Supply Outlook etc. And Upgrade of Existing Website to Display Real Time Data, Products & Warnings in connection with the project BWCSRP Component-B: SHEWS, BWDB, Dhaka.**

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A discussion on Draft Final Report of the subject mentioned study was held on 26 December, 2023 at 11:00 am in the conference room of Additional Director General (Planning, Design and Research), Level-5, Pani Bhaban, 72 Green Road, BWDB, Dhaka. The meeting was presided over by Mr. A. K. M. Tahmidul Islam, Additional Director General (Planning, Design and Research), BWDB. A list of participants is attached in the Annexure-1. Upon welcoming the participants Additional Director General (Planning, Design and Research) opened the meeting. He requested the Project Director, BWCSRP Component-B to introduce the agenda of the meeting. Mr. Mashieur Rahman, Project Director, BWCSRP Component-B, extended welcome to the participants and asked Dr. Ahmadul Hassan, the Team Leader (TL) of the package, for initiating the detailed presentation. Then, the following discussion was carried out on sediment prediction and morphology model.

| Sl. | Discussion   | Recommendation  | Remarks |
|-----|--|---|---------|
| 1.  | It was highlighted in the meeting that there is some uncertainty with the prediction of drought. The indexing process using the rainfall data itself has some uncertainty. Moreover, there is also uncertainty in the prediction model. So, this uncertainty of the models should be highlighted in the report. In this context, it was mentioned that data anomaly should be checked before indexing. | Results and uncertainty of the models must be explained in the final report, highlighting the limitations and explaining the recommendations to improve it.                             |         |
| 2.  | It was discussed that the prediction by RF model could not pick the peak of a severe drought in a year (figure 5.16). The result produced by ARIMA model is more acceptable than RF model and two to three years validation of the model results is needed to decide which model was providing better results. Concerns were also raised about dissemination of model results to the public.           | Dissemination of model result should be done after running the model internally for at least two to three years. Meanwhile it can be shown in the web portal as 'experimental product'. |         |
| 3.  | It was discussed in the meeting about identifying the SPI index using the rainfall data of BWDB. Concerns were also raised about considering the soil moisture data which is an important indicator of drought. It was also discussed if the model result has been compared with any other result produced by other organization.  | The model result should be compared with model result produced by BMD and it should be included in the final report.  |         |
| 4.  | Concerns were raised about the implementation arrangement of the models and personnel from which office should be the core people to operate the   | BWDB will decide which Directorate/Office will be responsible to operate  |         |

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|  | models. In this regard, it was suggested that, Processing and Flood Forecasting Circle must be involved in operating the models, beside them other professionals can be involved from different circles. | which model in future. |  |
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As there were no further discussions, Mr. A. K. M. Tahmidul Islam, Additional Director General (Planning, Design and Research), BWDB closed the meeting by expressing his thanks to the attendees.

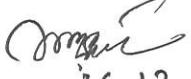
  
 (A. K. M. Tahmidul Islam)  
 Additional Director General  
 (Planning, Design & Research)  
 BWDB, Dhaka.

Memo no. WCS/C-15/8795

Date: 26/12/2023

**Distribution (not as per seniority):**

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 26/12/2023.  
 (Mashiur Rahman)  
 Project Director,  
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