

## MEMORANDUM OF UNDERSTANDING

**Between the Ministry of Water Resources, Government of the People's Republic of Bangladesh and the Ministry of Water Resources of the People's Republic of China upon Provision of Hydrological Information of the Yaluzangbu/Brahmaputra River in Flood Season by China to Bangladesh**

The Ministry of Water Resources, Government of the People's Republic of Bangladesh and the Ministry of Water Resources, the People's Republic of China, (hereinafter referred to as the "two sides"),

**Recognizing** that timely and reliable hydrological information in upstream of Yaluzangbu/Brahmaputra River in flood season is crucial to meet the demand of flood control and disaster mitigation in downstream area of the river;

**Based** on the Memorandum of Understanding signed by the two sides on cooperation in the field of water resources on 18 August 2005 and the Memorandum of Understanding signed by the two sides upon Provision of Hydrological Information of the Yaluzangbu/Brahmaputra River in Flood Season By China to Bangladesh on 08<sup>th</sup> June 2014;

**Willing** to provide the hydrological information of Yaluzangbu/Brahmaputra River in flood season by China to Bangladesh;

**Have agreed as follows:**

1. The two sides agree that based on friendly cooperation, mutual benefit, good faith and equality, in accordance with respective laws and regulations, the Chinese side will provide the Bangladeshi side with the hydrological information of Yaluzangbu/Brahmaputra River in flood season.
2. The Chinese hydrological stations, which will provide hydrological information in flood season to the Bangladeshi side, include Nugesha, Yangcun, and Nuxia station, lying on the mainstream of Yaluzangbu River.
3. The Chinese side agrees that China will provide Bangladesh with information of water level, discharge and rainfall of 8:00 hrs and 20:00 hrs (Beijing Time) /6:00 hrs and 18:00 hrs (Dhaka Time) twice a day from May 15<sup>th</sup> to October 15<sup>th</sup> each year. The Chinese side also agrees to timely provide

hydrological information to the Bangladeshi side if values of water level exceed mutually agreed value during the non-flood season.


4. The Chinese side agrees to shoulder the cost for provision of hydrological information to Bangladesh in flood season.

5. The Bangladeshi side's implementing agency is the Joint Rivers Commission, Ministry of Water Resources, Government of the People's Republic of Bangladesh. The Chinese side's implementing agency is the Bureau of Hydrology and Water Resources Survey, Tibet Autonomous Region of China.

6. The implementing agencies will discuss and sign the Implementation Plan of provision of hydrological information. The major content of the Implementation Plan includes technical details of provision of hydrological information, data transmission method and so on.

7. The present Memorandum shall become effective from the day of its signature by the duly authorized representatives of the two sides and shall remain in force for a period of five years and be renewed thereafter for further period with mutual consent. The present Memorandum can be amended and modified with mutual agreement.

Signed at Beijing on 04<sup>th</sup> July , 2019, in duplicate in Chinese and English, both texts are equally authentic.



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Ministry of Water Resources, Government  
of the People's Republic of Bangladesh



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Ministry of Water Resources  
The People's Republic of China

孟加拉人民共和国水利部和中华人民共和国水利部  
关于中方向孟方提供雅鲁藏布江—布拉马普特拉河  
汛期水文资料谅解备忘录

孟加拉人民共和国水利部和中华人民共和国水利部（以下简称双方），

认识到及时、可靠的雅鲁藏布江—布拉马普特拉河上游河段洪水信息对于下游地区防洪减灾至关重要；

根据二〇〇五年八月十八日双方签署的《孟加拉人民共和国水利部与中华人民共和国水利部在水资源领域合作的谅解备忘录》及二〇一四年六月八日双方签署的《孟加拉人民共和国水利部和中华人民共和国水利部关于中方向孟方提供雅鲁藏布江—布拉马普特拉河汛期水文资料的谅解备忘录》；

愿意由中方向孟方提供雅鲁藏布江—布拉马普特拉河汛期水文资料；

达成协议如下：

一、双方同意，在友好合作、互利、互信和平等的基础上，根据各自国家的法律和规章，由中方向孟方提供雅鲁藏布江—布拉马普特拉河汛期水文资料。

二、中方向孟方提供汛期水文资料的水文站是位于中方境内雅鲁藏布江干流段的奴各沙、羊村、奴下三个水文站。

三、中方同意，每年五月十五日至十月十五日期间，每日两次向孟方提供上述第二条中三个水文站每日北京时间八时和二十时（达卡时间六时和十八时）的雨量、水位和流量资料。中方也同意，如果非汛期发生超过双方商定水位的洪水，中方将及时向孟方通报汛情。

四、中方同意，向孟方提供汛期水文资料涉及的经费由中方承担。

五、孟方执行单位是孟加拉人民共和国水利部跨界河流联合委员会，中方执行单位是中华人民共和国西藏自治区水文水资源勘测局。

六、由双方执行单位磋商签订报汛实施方案，主要内容包括报汛技术细节、数据的传输方式等事项。

七、本谅解备忘录自双方授权代表签字之日起生效，有效期为五年。经双方协商同意，本谅解备忘录有效期可延长。经双方同意，本谅解备忘录可予修改。

本谅解备忘录于二〇一九年七月四日在北京签订，一式两份，每份都用中文和英文写成，两种文本同等作准。



孟加拉人民共和国水利部

代 表



中华人民共和国水利部

代 表

## **Implementation Plan**

**between the Joint Rivers Commission,**

**Ministry of Water Resources, Government of the People's Republic of Bangladesh and**

**the Bureau of Hydrology and Water Resources Survey,**

**Tibet Autonomous Region, the People's Republic of China**

**on Provision of Hydrological Information of the Yaluzangbu/ Brahmaputra River**

**in Flood Season by China to Bangladesh**

Based on the Memorandum of Understanding signed by the Ministry of Water Resources, Government of the People's Republic of Bangladesh and the Ministry of Water Resources, the People's Republic of China on Provision of Hydrological Information of the Yaluzangbu/Brahmaputra River in Flood Season by China to Bangladesh (hereinafter referred to as "MOU") on 04<sup>th</sup> July, 2019, the Bangladeshi implementing agency-the Joint Rivers Commission, Ministry of Water Resources of Bangladesh and the Chinese implementing agency-the Bureau of Hydrology and Water Resources Survey, Tibet Autonomous Region of China (hereinafter referred to as the "two sides") have reached the following agreements after mutual consultation:

1. The two sides agree that based on friendly cooperation, mutual benefit, good faith and equality, and in compliance with respective laws and regulations, the Chinese side will provide hydrological information of the Yaluzangbu/Brahmaputra River in Flood Season to the Bangladeshi side in accordance with the Chinese standards of hydrological monitoring and forecasting. The Bangladeshi side will provide the Chinese side with the effects of hydrological data on flood control and disaster mitigation in Bangladesh.
2. The hydrological information provided by the Chinese side in flood season will be supplied from three Chinese hydrological stations lying on the mainstream of the Yaluzangbu River, namely Nugesha (Latitude: 29<sup>o</sup>21'N, Longitude: 89<sup>o</sup>42'E), Yangcun (Latitude: 29<sup>o</sup>16'N, Longitude: 91<sup>o</sup>52'E) and Nuxia (Latitude: 29<sup>o</sup>28'N, Longitude: 94<sup>o</sup>34'E) stations.
3. The Chinese side will provide Bangladeshi side with hydrological information in flood season from May 15<sup>th</sup> to October 15<sup>th</sup> each year within 30 minutes after 8:00 hrs and 20:00 hrs (Beijing Time)/6:00 hrs and 18:00 hrs (Dhaka Time).

To guarantee timely provision of hydrological information on May 15<sup>th</sup>, the Chinese side will have a trial provision at 8:00 hrs (Beijing Time)/6:00 hrs (Dhaka Time) on May 12<sup>th</sup> each year, and the Bangladeshi side shall reply immediately.

In case of abnormal changes in water level and discharge taking place and other circumstances that might lead to sudden flood, the Chinese side agrees to share relevant information with the Bangladeshi side through diplomatic channels, if it's necessary and conditions for hydrological monitoring and information acquisition are permissive.

4. The Chinese side will provide the Bangladeshi side with information of water level, discharge and rainfall of the above three stations in flood season.
- 4.1 The rainfall unit will be millimeter (mm). When round number is more than or equal to 1 mm, decimal points will use the method of half adjust. When rainfall data is less than 1mm or there

is no rain, '0' (zero) will be presented. Rainfall data at 8:00 hrs (Beijing Time, the following time are the same with it) is the interval rainfall from 20:00 hrs of the previous day to 8:00 hrs of this day, and that at 20:00 hrs is the interval rainfall from 8:00 hrs to 20:00 hrs of this day.

- 4.2 The water level unit will be meter (m). The record with two decimal points will be provided. The assumed datum plane is used by every station. Value of assumed datum plane shall be supplied to Bangladeshi side at the beginning or subsequently when there is a change in assumed datum plane.
- 4.3 The discharge unit will be cubic meter per second (m<sup>3</sup>/s). When discharge data is more than or equal to 100 m<sup>3</sup>/s, the record will be provided only by round number. When discharge data is less than 100 m<sup>3</sup>/s and more than or equal to 10 m<sup>3</sup>/s, the record with one decimal point will be provided. When the discharge data is less than 10 m<sup>3</sup>/s, the record with two decimal points will be provided.
5. Discharge data can be derived from the water level-discharge relation curve which is developed from the mean average synthetic rating curve of previous years or the rating curve of the previous year before flood season. If water level exceeds the extent of relation curve, discharge data can be derived from the extended curve.
6. Contact address of the two sides:

The Bangladeshi side:

The Joint Rivers Commission, Ministry of water Resources of Bangladesh

E-mail: jrcombd@gmail.com

Fax: (+880)-2-44819063

Tel: (+880)-2-44819061

The Chinese side:

The Bureau of Hydrology and Water Resources Survey, Tibet Autonomous Region of China

E-mail : xzswszyj@public.ls.xz.cn

Fax: (+86) 891 6352834

Tel: (+86) 891 6352834, (+86) 891 6356607

7. Channel of provision: The Chinese implementing agency will transmit hydrological information to the Bangladeshi implementing agency directly.
8. Method of provision: The Chinese side will transmit hydrological information to the Bangladeshi side in the following form of text file by E-mail address at [ffwc@ffwc.gov.bd](mailto:ffwc@ffwc.gov.bd) via Internet.


\*\*\*\*year\*\*month\*\*day\*\*time hydrological information table

| Station name | Rainfall (mm) | Water level (m) | Discharge (m <sup>3</sup> /s) |
|--------------|---------------|-----------------|-------------------------------|
| Nugesha      | ***           | **** **         | ****                          |
| Yangcun      | ***           | **** **         | ****                          |
| Nuxia        | ***           | **** **         | ****                          |

If the Bangladeshi side does not receive the data, it will inform the Chinese side by e-mail or fax immediately, and Chinese side shall send the data again.

9. The Bangladeshi side will provide the Chinese side (Department of International Cooperation & Science and Technology, Ministry of Water Resources, People's Republic of China) in written form with the effects of Chinese provided data on flood control and disaster mitigation in Bangladesh before 15<sup>th</sup> April every year through diplomatic channel.
10. During the data provision period, if the Bangladeshi side has any other requirements, it should bring them forward to the Chinese side through diplomatic channels.
11. The Chinese side will cover additional staff, operation and maintenance costs for the provision of hydrological information of the above three stations to the Bangladeshi side.
12. In order to ensure normal provision of hydrological information, after mutual consultation and on the basis of equality, the two sides may dispatch hydrological experts to each other's country to conduct study tour if necessary.
13. This implementation plan shall become effective from the day of its signature by the authorized representatives of the two sides and remain in force when the MOU is effective.

Signed at Beijing on 04<sup>th</sup> July, 2019 in duplicate in English and Chinese, and both texts are equally authentic.



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The Joint Rivers Commission  
Ministry of Water Resources  
Government of the People's Republic of  
Bangladesh



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The Bureau of Hydrology and Water  
Resources Survey  
Tibet Autonomous Region  
The People's Republic of China

## 孟加拉人民共和国水利部跨界河流联合委员会与中华人民共和国西藏自治区水文水资源勘测局关于中方向孟方提供雅鲁藏布江—布拉马普特拉河汛期水文资料的实施方案

根据孟加拉人民共和国水利部与中华人民共和国水利部于二〇一九年七月四日签订的《孟加拉人民共和国水利部与中华人民共和国水利部关于中方向孟方提供雅鲁藏布江-布拉马普特拉河汛期水文资料的谅解备忘录》(以下简称“备忘录”),由孟方执行单位—孟加拉人民共和国水利部跨界河流联合委员会和中方执行单位—中华人民共和国西藏自治区水文水资源勘测局(以下简称“双方”)协商,达成如下实施方案:

1、双方同意,在友好合作、平等互利的基础上,根据各自国家的法律和规章,由中方依照本国有关水文测验和水文情报预报规范,向孟方提供雅鲁藏布江-布拉马普特拉河汛期水文资料。孟方将向中方通报有关水文数据对于孟加拉国防洪减灾的效果。

2、中方提供的汛期水文资料由位于中方境内雅鲁藏布江干流段的奴各沙(东经 $89^{\circ}42'$ ,北纬 $29^{\circ}21'$ )、羊村(东经 $91^{\circ}52'$ ,北纬 $29^{\circ}16'$ )和奴下(东经 $94^{\circ}34'$ ,北纬 $29^{\circ}28'$ )三个水文站承担。

3、报讯时间:每年汛期的5月15日至10月15日,中方于北京时间每日8时和20时(即达卡时间6时和18时)之后30分钟内向孟方报讯。

为保证5月15日准时报讯,中方于每年5月12日北京时间8时(达卡时间6时)向孟方试报讯一次,孟方应及时回复。



当出现不正常的水位和流量变化以及其它可能导致突发性洪水的情况，如果必要并在监测条件和信息获取途径许可的情况下，中方同意通过外交渠道与孟方分享有关信息。

4、报讯项目和数据格式：中方向孟方提供上述三个水文站的汛期水情信息，共三项：雨量、水位、流量。

4.1 降水量计量单位为毫米（mm）。起报标准为 1mm，降水量值只报整数，小数点以后用“4 舍 5 入法”处理，降水量值达不到起报标准或无雨时，用“0”表示；8 时雨量值为前一天 20 时（北京时间，下同）至当天 8 时的时段雨量，20 时雨量值为当天 8 时至 20 时的时段雨量。

4.2 水位计量单位为米（m）。报至小数点后两位，基面使用各站假定基面。当基面发生变化时，将立即或随后向孟方提供。

4.3 流量单位为立方米/秒（ $m^3/s$ ）。流量值大于或等于  $100 m^3/s$  时，只报整数，但有效数字不超过三位；小于  $100 m^3/s$ 、大于或等于  $10 m^3/s$  时，报至小数点后一位；小于  $10 m^3/s$  时，报至小数后二位。

5、流量数据根据各报讯站每年汛前编制的历年综合或上一年水位与流量关系曲线查报。如水位超出关系曲线，则顺势上延查值报出。

6、报讯执行单位：

A) 孟方执行单位：

孟加拉人民共和国水利部跨界河流联合委员会

E-MAIL: jrcombd@gmail.com;

传真: (+880) 2 44819063

电话: (+880) 2 44819061

B) 中方执行单位：

中华人民共和国西藏自治区水文水资源勘测局

E-MAIL: xzswszyj@public.ls.xz.cn

传真: (+86) 891 6352834

电话: (+86) 891 6352834, (+86) 891 6356607

7、报讯路径: 中方执行单位直接向孟方执行单位传输水情信息。

8、报讯方式: 双方通过互联网, 按约定的电子邮件地址, 由中方按下列格式以文本文件形式向孟方发送电子邮件 (ffwc@ffwc.gov.bd) 传输水情信息:

\*\*\*\*年\*\*月\*\*日\*\*时水情表

| 站名          | 雨量(mm) | 水位(m) | 流量(m <sup>3</sup> /s) |
|-------------|--------|-------|-----------------------|
| Nugesha 奴各沙 | ***    | ***** | ****                  |
| Yangcun 羊村  | ***    | ***** | ****                  |
| Nuxia 奴下    | ***    | ***** | ****                  |

如果孟方未收到上述信息, 孟方应立即通过电子邮件或传真通知中方, 中方将再次向孟方传输水情信息。

9、孟方于每年4月15日前以书面形式经外交途径向中方(中华人民共和国水利部国际合作与科技司)通报有关数据对于孟加拉国防洪减灾的效果。

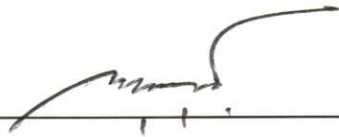
10、报讯期间, 孟方如果有其他要求, 须通过外交途径提出。

11、中方将负担上述三个水文站向孟方报讯额外增加的人员费用及运行维护费。

12、为保障报讯工作的正常进行, 必要时经过两国友好协商, 可按对等原则互派水文专家, 就相关业务进行考察。

13、本方案自双方授权代表签字之日起生效，并在谅解备忘录有效期内有效。

本方案于二〇一九年七月四日在北京签订，一式二份，每份都用中文和英文写成，两种文本同等作准。



孟加拉人民共和国水利部  
跨界河流联合委员会代表



中华人民共和国西藏自治区  
水文水资源勘测局代表

个签在上面