

FOREWORD

The work of preparation of Detailed Project Report (DPR) of Intra-State links proposed by State Governments is included in the functions of National Water Development Agency (NWDA). Based on the request of Government of Bihar, NWDA took up the preparation of DPR of Kosi-Mechi Intra-State link with effect from November, 2011. This Intra-State link project is the second such project of the Government of Bihar taken up by NWDA for preparation of DPR. NWDA has completed the DPR of this project in a record time of two years and five months.

The Kosi-Mechi Intra-State Link Project is an irrigation scheme. It envisages to provide irrigation to a new command area of about 2.15 lakh hectare by diverting 1814 million cubic meters of surplus water of Kosi river from the existing Kosi Barrage through extended link canal. The irrigation provided during the monsoon period, that is, from June to October, will benefit areas in Araria, Purnea, Kishanganj and Katihar districts of Bihar.

The DPR of the link project has been prepared as per the Guidelines for Preparation of Detailed Project Report of Irrigation and Multipurpose Projects of Ministry of Water Resources, Govt. of India (2010). The DPR contains the details of all surveys and investigations such as topographical surveys, geotechnical & construction material surveys, geological investigations, environmental impact assessment studies etc.

Secretary, Ministry of Water Resources and Chairman, Central Water Commission took keen interest and continuously monitored the progress of DPR of the project and gave valuable suggestions for its timely completion. Their contribution in this regard is gratefully acknowledged. The cooperation and assistance received from the Water Resources Department, Government of Bihar in preparation of the DPR is thankfully acknowledged. My thanks to the Central Water Commission, Central Soil & Materials Research Station and Geological Survey of India who were closely associated in various aspects of the investigation and studies and provided necessary technical assistance.

I complement the concerned officers of NWDA especially Chief Engineer (HQ), Chief Engineer (North), Lucknow, Superintending Engineer, Investigation Circle, Patna and his team for their sincerity, devotion and hard work in completing this challenging task in the assigned time period.

It is hoped that the project will be implemented by Government of Bihar in right earnest.

March 31, 2014
New Delhi

(S. Masood Husain)
Director General, NWDA

PREFACE

The Kosi-Mechi Link Project entirely lies in the State of Bihar. The existing Kosi Project consists of a barrage across river Kosi near Hanuman Nagar town close to Indo-Nepal border, canal headworks, Western Kosi Main Canal (WKMC) system in Nepal and Eastern Kosi Main Canal (EKMC) system in India. The present proposal is an extension of EKMC upto river Mechi, a tributary of river Mahananda. The Government of Bihar vide their letter dated 28.07.2008 proposed to extend the existing Eastern Kosi Main Canal (EKMC) beyond its tail end at RD 41.30 km, so that rivers Kosi and Mechi which flow through Bihar itself after crossing Indo-Nepal border could be linked together within Bihar. The Link Project will provide additional irrigation facilities to the tune of 2.11 lakh ha in the new command area enroute of the link in Mahananda basin between rivers Parman and Mechi covering Araria, Purnea, Kishanganj and Katihar districts of Bihar. The irrigation will be provided during kharif season from June to October.

NWDA as a first step prepared the Preliminary Feasibility Report (PFR) of the link project and submitted to Government of Bihar in June, 2009 for examination. Further, a meeting was held on January 18, 2010 between officers of WRD, Government of Bihar and NWDA in which the State Government desired the preparation of DPR of Kosi-Mechi Link Project as the scheme was found viable in the PFR stage.

NWDA took up the work of preparation of Detailed Project Report (DPR) of Kosi-Mechi Intra-State Link Project in November, 2011 as desired by Government of Bihar. The detailed field surveys and investigations have been carried out to establish the techno-economic viability of the project. NWDA has prepared Preliminary Project Report (PPR) of the link project, as decided in 27th Annual General Meeting (AGM) of NWDA held in March 31, 2012 and submitted the same to Government of Bihar and Central Water Commission (CWC) during October, 2012 for their examination.

The suggestions/views of the Water Resource Department (WRD), Government of Bihar have been considered while preparing the DPR of the project. Hydrological observation data were collected from Central Water Commission (CWC). Cropping pattern, crop yield per ha, cost of produce and cost of cultivation etc. were collected from the Government of Bihar and utilized in the report.

Various survey and investigation works done by NWDA with the help of expert agencies have been duly incorporated in the DPR. The geotechnical and construction material investigations have been done by Central Soil & Material Research Station (CSMRS), whereas geological investigations have been carried out by Geological Survey of India (GSI). The environmental impact assessment and socio-economic studies have been carried out by M/s Economic Development Trust (EDT), New Delhi. The topographical survey of link alignment and command area surveys were carried out departmentally.

Kosi-Mechi Link Project envisages to extend the existing EKMC beyond its tail end at RD 41.30 km upto Mechi river. The total length of the link including the length of existing EKMC is 117.50 km. Total cost of the Project has been estimated as Rs. 2903.25 crore. The benefit cost ratio of project is 3.66.

The Detailed Project Report of Kosi-Mechi link project has been prepared by following the Guidelines for Preparation of Detailed Project Report of Irrigation and Multipurpose Projects of Ministry of Water Resources, Govt. of India (2010). The Project Report has been prepared in four volumes, i.e., Volume I- Main Report, Volume II-Annexures, Volume III-Drawings and Volume IV-Appendices. The investigation reports are furnished in the Volume-IV.

Director General, NWDA continuously monitored the progress of preparation of Detailed Project Report and provided valuable guidance and advice which helped in timely completion of the DPR. His contribution in this regard is gratefully acknowledged. I also acknowledge the support provided by Chief Engineer (HQ) and his team.

The officers of Water Resources Department, Government of Bihar provided continuous support to NWDA in preparation of DPR. Their contribution in this regard is thankfully acknowledged.

I also would like to place on record my sincere thanks to all the officers and staff of Investigation Circle, Patna and its Lucknow Division for their untiring efforts due to which the DPR could be completed in time.

March 30, 2014
Lucknow



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