

Chapter-I

Introduction

In this chapter, brief about Saryu Nahar Pariyojana (SNP), audit objectives, criteria, scope and methodology have been discussed.

Brief snapshot of the Chapter

- SNP was formulated in 1982 at an estimated cost of ₹ 299.20 crore to create Culturable Command Area of 12 lakh hectare in nine eastern region districts of Uttar Pradesh. The targeted CCA was revised to 11.29 lakh hectare in December 2017.
- The project was commissioned in December 2021 against the target of completion in 1988-89.
- SNP received ₹ 10,346.70 crore against which ₹ 10,003.11 crore was spent as of March 2022.

1.1 Introduction

Left Bank Ghaghara Canal project was formulated by the State Government in the year 1974 to irrigate 3.54 lakh hectare Culturable Command Area (CCA) of trans-Ghaghara region in the eastern part of Uttar Pradesh. Subsequently, the State Government extended (March 1982) the scope of the Left Bank Ghaghara Canal project to 12 lakh hectare area (irrigation potential: 14.04 lakh hectare¹) covering the trans-Rapti area also. The project was renamed as Saryu Nahar Pariyojana (SNP) at the estimated cost ₹ 299.20 crore and targeted to be completed by 1988-89.

The project went through multiple cost revisions and delays since its inception. The project cost was revised (August 1985) to ₹ 696 crore due to increase² in price of construction material and labour, inadequate funding and inclusion of additional works in the scope of the project. The project was targeted for completion by 1992-93. However, the target was not met as planned outlay envisaged for the project was not available and the project cost was again revised to ₹ 1,256 crore in 1992-93. The remaining work of the project was divided (1992-93) into three phases (**Appendix 1.1**) with timeline set for completion of works of each phase. The completion of the third phase was scheduled for 2005-06.

In June 1998, the Expenditure Finance Committee (EFC) of the State Government decided to stop the work of Phase-III (Rapti Main Canal and its distribution system) and directed to prepare separate Detailed Project Report (DPR) for these works based on actual survey. Thus, works of Phase I and Phase II only continued thereafter. The project cost of the works of Phase-I and Phase-II was further revised to ₹ 2,522.02 crore in November

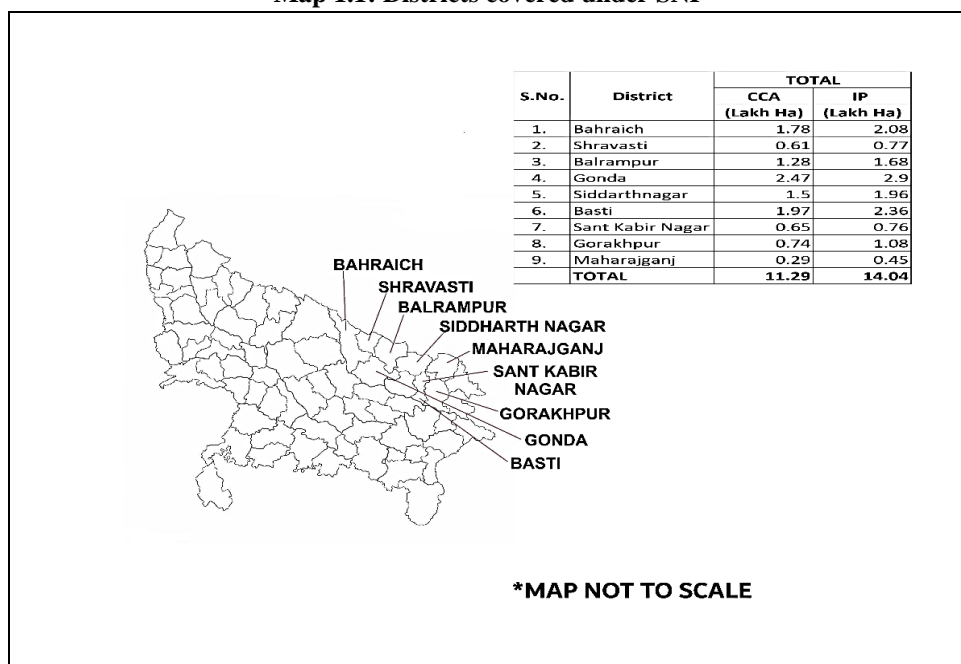
¹ Irrigation potential of 14.04 lakh hectare includes Kharif: 9.24 lakh hectare and Rabi: 4.80 lakh hectare.

² The capital cost (₹ 299.20 crore) of the project was based on the price index of 1978.

2006. Meanwhile, in February 2000, the Rapti Canal System (i.e., Phase III work) was found to be feasible in the feasibility studies and a further revision of the DPR in March 2010 increased the project cost to ₹ 7,270.32 crore which *inter alia* included the works of Rapti system, targeting completion of the project by the year 2014. Subsequently, in the revised DPR 2017, the State Government revisited the coverage of the project and reduced the CCA to 11.29 lakh hectare from earlier planned CCA of 12 lakh hectare mainly due to urbanisation. The inclusion of additional works and increase in costs of labour and material caused the project cost to increase to ₹ 9,802.68 crore in October 2017 with a revised completion date of December 2019. However, the project was commissioned in December 2021 with a total expenditure of ₹ 10,003.11 crore up to March 2022. Further, as of March 2022, entire main canals (257 Km) and branch canals (777 Km) were completed, but 228 Km of distributary and minor canals out of 5,377 Km proposed distributary and minor canals were not constructed. The financial closure of the project was yet to be done (October 2024).

The CCA of 11.29 lakh hectare at present covers the nine eastern districts of the State, *vis.*, Bahraich, Balrampur, Basti, Gonda, Gorakhpur, Maharajganj, Sant Kabir Nagar, Siddharthnagar and Shravasti, as depicted in **Map 1.1**.

Map 1.1: Districts covered under SNP



The SNP (erstwhile Left Bank Ghaghara Canal Project) was funded from the State Government's resources during 1977-78³ to 1995-96, under Accelerated Irrigation Benefit Programme (AIBP) from 1996-97 to 2011-12, under National Project from 2012-13 to 2014-15 and from 2015-16 to 2021-22 under Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). Besides, the project also received loan from National Bank for

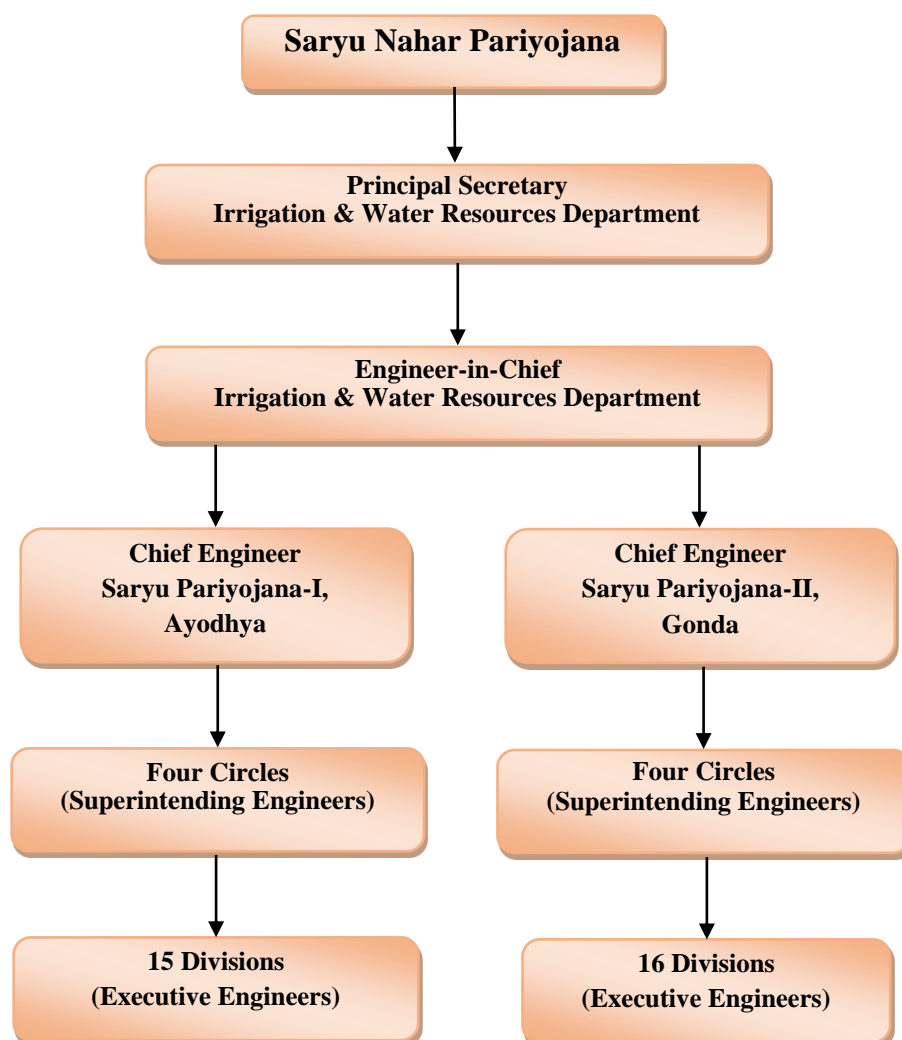
³ Left Bank Ghaghara Canal Project (now SNP) was though prepared in the year 1974, the fund was allotted for project since 1977-78.

Agriculture and Rural Development (NABARD) from 1996-97 to 2004-05. Thus, SNP received ₹ 10,346.70 crore during 1977-78 to 2021-22 against which ₹ 10,003.11 crore was spent as of March 2022.

1.2 Organisational set-up

SNP was implemented by Irrigation and Water Resources Department (I&WRD), which is responsible for providing irrigation water to farmers in the State. I&WRD is headed by Principal Secretary and the implementation of various irrigation project is carried out under the technical control of the Engineer-in-Chief at the State level, Chief Engineers at the Zone level, Superintending Engineer (SE) at Circle level and Executive Engineers (EE) at the Division level. The implementation of SNP was carried out under the technical supervision of Chief Engineers, Saryu Pariyojana-I, Ayodhya and Saryu Pariyojana-II, Gonda with eight SEs and 31 EEs. The organogram of SNP is given in **Figure 1.1**.

Figure 1.1: Organogram of SNP



Command area development works in command of SNP were carried out by Commissioner, Greater Sharda Sahayak Command Area Development

Authority (GSSCADA), Lucknow which is also under the administrative control of I&WRD.

1.3 Audit objectives

The performance audit of SNP has been carried out with the following audit objectives:

- Whether project was conceptualised after assessing its feasibility and taking into account the need of the command area;
- Whether funds were adequate, available timely and utilised properly;
- Whether project was executed in an economic, efficient and effective manner;
- Whether contemplated culturable command area was created and utilised; and
- Whether the project implementation was monitored effectively.

1.4 Audit criteria

The audit criteria have been drawn from the following sources:

- Irrigation Manual of Orders of the State Government;
- Guidelines for Submission, Appraisal and Acceptance of Irrigation and Multipurpose Projects, 2010 and 2017 issued by the Central Water Commission (CWC);
- Guidelines on Command Area Development & Water Management Programme issued by the GoI;
- Environment (Protection) Act, 1986 and Environment Impact Assessment Notification, 1994 issued by the GoI;
- Land Acquisition Act, 1894 and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, *Karar Niyamavali*, 1997 issued by the State Government for land purchase and other Government orders;
- Financial rules and instructions issued by the State Government; and
- Detailed Project Reports of SNP.

1.5 Audit scope and methodology

The Performance Audit (PA) has covered the period from 2017-18 to 2021-22 with backward and forward linkages to assess, broadly, whether SNP after its long journey of construction was completed as per the laid down objectives and whether the envisaged benefits were delivered actually to the command area of the project. Records were examined in the offices

of the Principal Secretary (I&WRD), E-in-C (I&WRD), two CEs, eight SEs⁴ and 17 divisions (all 12 divisions carrying out construction works and five out of 17 other divisions⁵ engaged in maintenance, repair and delivery of water). Sampling was done using statistical sampling method⁶.

Records were also examined in the office of Commissioner, GSSCADA in respect of development of command area of SNP. Further, information regarding micro irrigation⁷ facility in the command area of the project have been obtained from Horticulture and Food Processing Department. Apart from examination of records, joint physical visits of the selected canals⁸ by Audit with SNP officials were also undertaken to observe the status of maintenance of created assets under the project.

Audit objectives, criteria and scope were discussed with the State Government in an entry conference held on 26 September 2022. Exit meeting was held on 21 November 2023 with the State Government to discuss the findings of the draft PA report and recommendations made therein. The State Government furnished replies in November 2023 and January 2024, which have been suitably incorporated in the draft report.

1.6 Components of the project

The project envisages transferring water to the canal network of the project from Girija barrage on river Ghaghara, Saryu Barrage on river Saryu and from Rapti Barrage on river Rapti. Cumulatively, 76.20 to 359.42 cumec water during months of Kharif season and 14.50 to 178.03 cumec water during the months of Rabi season was to be supplied to the canal network of the project. The major components of the project included two barrages, *vis.*, Saryu Barrage and Rapti Barrage; four main canals, *vis.*, Saryu Link Channel (SLC- 47.135 Km), Saryu Main Canal (SMC- 63.150 Km), Rapti Link Channel (RLC- 21.400 Km) and Rapti Main Canal (RMC- 125.682 Km); ten branch canals (776.606 Km; and distributaries and minor canals (5377.440 Km), as detailed in **Appendix 1.2**. A schematic diagram of SNP is given in **Figure 1.2**.

⁴ (i) Irrigation Construction Circle, Bahraich, (ii) XVth Circle Irrigation works, Gonda, (iii) Quality Control Circle, Ayodhya, (iv) Drainage Circle, Gonda, (v) Irrigation Construction Circle, Basti, (vi) IXth Circle Irrigation Works, Bahraich, (vii) Rapti Canal Construction Circle-1, Balrampur, and (viii) Rapti Canal Construction Circle -2, Basti.

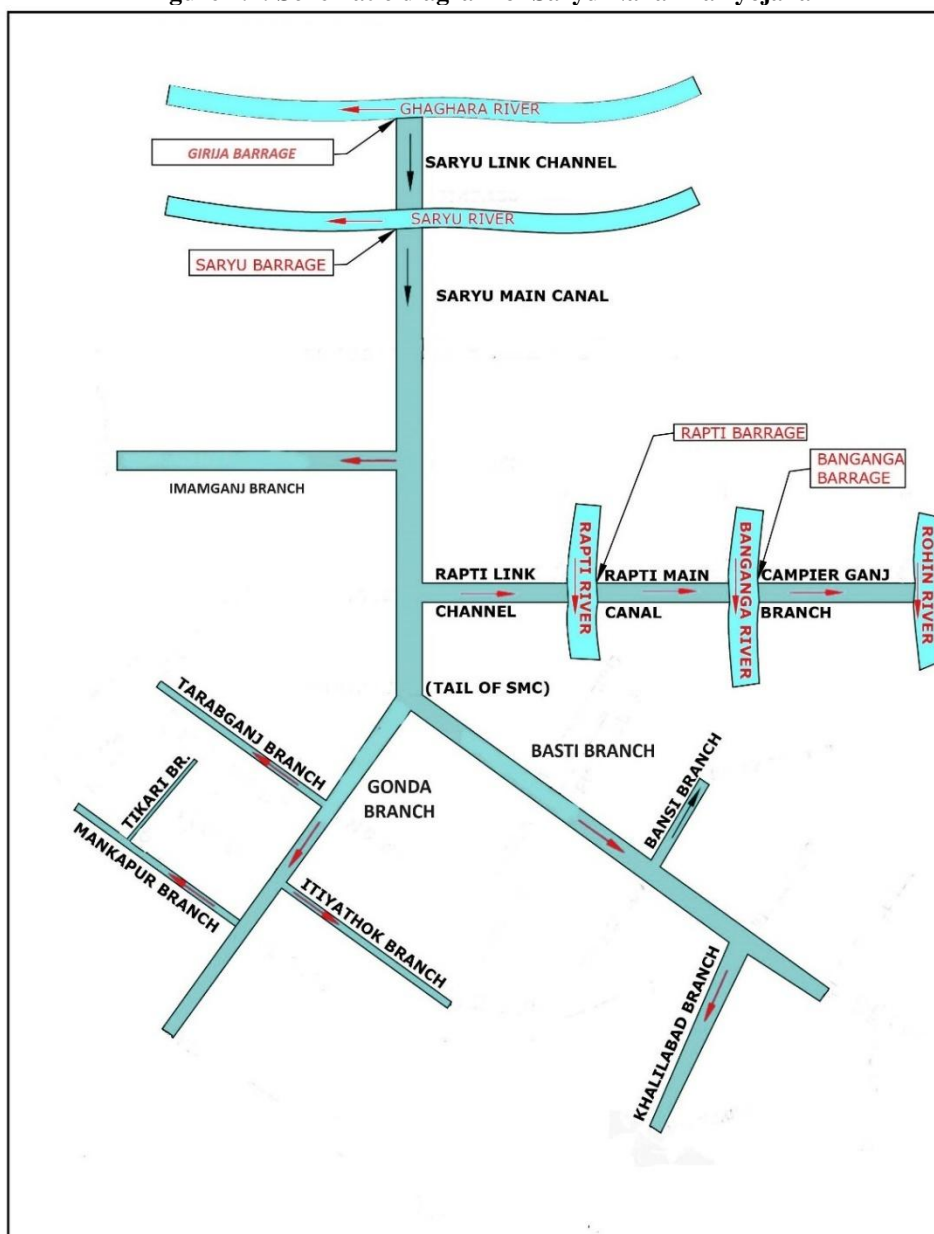
⁵ Two quality control divisions were not taken in sample and the information in respect of quality control were obtained from the SE, quality control circle Ayodhya under which these two quality control divisions were working.

⁶ Probability Proportionate to Size Without Replacement method.

⁷ Method of irrigation to enhance water use efficiency.

⁸ For the purpose of sampling, canals were grouped in upper reach, middle reach, and tail reach. Overall, thirty-five canals covering canals from each group, were selected using Simple Random Sampling Without Replacement (SRSWOR) method. All 216 villages under the command areas of the selected canals were kept under the scope of PA for examination of data related cropping pattern and productivity.

Figure 1.2: Schematic diagram of Saryu Nahar Pariyojana



(Source: Index map of SNP provided by CE, Saryu Pariyojana-I, Ayodhya)

The Trans-Ghaghara region receives water through Imamganj Branch Canal from SMC, Basti Branch Canal (including Bansi and Khalilabad Branch Canals) and Gonda Branch Canal (including Tarabganj, Mankapur, Itiyathok and Tikri Branch Canals). The Trans-Rapti region receives water through RMC originating from the Rapti Barrage and Campierganj Branch Canal originating from Banganga Barrage. Four pump canals, *vis.*, Utrula, Dumariyaganj, Ayodhya and Gola were also constructed under the project to augment water supply into the canal network. Apart from these, drains were also to be constructed by 1989-90 in the command area of the project to control water logging.

1.7 Past Performance Audit of the project

A PA of SNP earlier appeared in the Audit Report (Civil) of the Comptroller and Auditor General of India for year ended 31 March 2008 – Government of Uttar Pradesh covering examination of records for the period from 2003-04 to 2007-08. In the previous PA, it was concluded that the project launched in 1977-78 and stated to complete by 1988-89, failed to achieve the intended objective as envisaged despite spending ₹ 2,440.72 crore during 1977-2008 due to improper planning leading to cost escalation (₹ 1,705.35 crore) and addition of new items (₹ 517.47 crore). The report highlighted that the delay in completion of the project was due to slow progress in acquisition of land in the absence of a firm policy and proper guidelines for land acquisition. The functional canal system had huge number of gaps and it was unable to carry water till tail end for irrigation. Apart from this, inadequate quality assurance in the execution of works and weak monitoring and internal controls were also highlighted in the report.

The action taken in respect of the audit observations included in the previous PA of the project was awaited (November 2024)⁹ from the State Government. However, in the present PA, it was observed that most of the deficiencies pointed out in the previous PA continued which affected the completion of project and achievement of project outcomes, as discussed in the Report.

1.8 Structure of Report

This report has been structured in following four Chapters:

Chapter-I: Introduction: deals with conceptualisation of SNP, its coverage, Audit objective, criteria, scope and methodology.

Chapter-II: Project Planning: deals with preparation of Detailed Project Reports on the basis of surveys and investigations on geographical, environmental and technical parameters.

Chapter-III: Project Implementation: deals with issues related to financial management, acquisition/purchase of land, contract management, quality assurance, technical supervision of works, internal control including documentation and evidencing.

Chapter-IV: Project Deliverables: deals with completion and commissioning of the project, creation and utilisation of CCA, command area development and maintenance of canal network; and human resource availability.

⁹ Public Accounts Committee (PAC) Uttar Pradesh informed (11 November 2024) that the outstanding paragraphs related to Performance Audit of SNP included in the CAG's Audit Report for the year 2007-08 were pending for settlement and Irrigation and Water Resources Department had not submitted the information on the action taken to the PAC.

1.9 Acknowledgement

We acknowledge the co-operation extended by I&WRD and its field offices, Agriculture Department and Horticulture and Food Processing Department in conducting the PA of SNP.