

Supplementary Table 1 Gap between future irrigation water demand and average existing irrigation water supply for *kharif* season

Year	Irrigation water demand at HR (Mm <sup>3</sup> )	10 years Avg. irrigation supply at HR (Mm <sup>3</sup> )	Difference (Mm <sup>3</sup> )	Area × Factor	Water table fall (m)
2021–22	2.41	37.39	34.98	19613.16	1.23
2022–23	2.59	37.39	34.80	19613.16	1.32
2023–24	2.57	37.39	34.81	19613.16	1.31
2024–25	2.58	37.39	34.80	19613.16	1.32
2025–26	2.59	37.39	34.79	19613.16	1.32
2026–27	2.60	37.39	34.78	19613.16	1.33
2027–28	2.61	37.39	34.78	19613.16	1.33
2028–29	2.58	37.39	34.81	19613.16	1.31
2029–30	2.50	37.39	34.89	19613.16	1.27
2030–31	2.59	37.39	34.80	19613.16	1.32
2031–32	2.59	37.39	34.79	19613.16	1.32
2032–33	2.60	37.39	34.79	19613.16	1.33
2033–34	2.61	37.39	34.78	19613.16	1.33
2034–35	2.73	37.39	34.66	19613.16	1.39
2035–36	2.74	37.39	34.64	19613.16	1.40
2036–37	2.73	37.39	34.65	19613.16	1.39
2037–38	2.75	37.39	34.63	19613.16	1.40
2038–39	2.76	37.39	34.63	19613.16	1.41
2039–40	2.77	37.39	34.62	19613.16	1.41
2040–41	2.77	37.39	34.61	19613.16	1.41
2041–42	2.77	37.39	34.61	19613.16	1.41
2042–43	2.78	37.39	34.60	19613.16	1.42
2043–44	2.75	37.39	34.64	19613.16	1.40
2044–45	2.75	37.39	34.64	19613.16	1.40
2045–46	2.76	37.39	34.63	19613.16	1.41
2046–47	2.76	37.39	34.63	19613.16	1.40
2047–48	2.70	37.39	34.69	19613.16	1.38
2048–49	2.73	37.39	34.65	19613.16	1.39
2049–50	2.74	37.39	34.64	19613.16	1.40
2050–51	2.75	37.39	34.64	19613.16	1.40

HR, Head Regulator.

Supplementary Table 2 Gap between future average irrigation water demand and existing average irrigation water supply on monthly basis for *rabi* season

Months	Irrigation water demand at HR (Mm <sup>3</sup> )	Irrigation supply at HR (Mm <sup>3</sup> )	Difference (Mm <sup>3</sup> )
December	0.38	0.00	-0.38
January	0.57	0.03	-0.55
February	0.57	0.72	0.15
March	0.72	0.81	0.09
April	0.60	0.90	0.30
May	0.32	0.48	0.16
Total	3.16	2.93	-0.23

HR, Head Regulator.

Supplementary Table 3 Gap between future irrigation water demand and average existing irrigation water supply for *rabi* season

Year	Irrigation water demand at HR (Mm <sup>3</sup> )	10 Years Avg. irrigation supply at HR (Mm <sup>3</sup> )	Difference (Mm <sup>3</sup> )	Area × Factor	Water table fall (m)
2021–22	2.87	2.93	0.05	19613.08	1.46
2022–23	3.11	2.93	-0.19	19613.08	1.59
2023–24	3.11	2.93	-0.19	19613.08	1.59
2024–25	3.11	2.93	-0.18	19613.08	1.59
2025–26	3.10	2.93	-0.18	19613.08	1.58
2026–27	3.11	2.93	-0.19	19613.08	1.59
2027–28	3.18	2.93	-0.25	19613.08	1.62
2028–29	3.18	2.93	-0.25	19613.08	1.62
2029–30	3.16	2.93	-0.24	19613.08	1.61
2030–31	3.18	2.93	-0.26	19613.08	1.62
2031–32	3.19	2.93	-0.26	19613.08	1.62
2032–33	3.17	2.93	-0.25	19613.08	1.62
2033–34	3.19	2.93	-0.27	19613.08	1.63
2034–35	3.18	2.93	-0.25	19613.08	1.62
2035–36	3.17	2.93	-0.25	19613.08	1.62
2036–37	3.18	2.93	-0.26	19613.08	1.62
2037–38	3.19	2.93	-0.27	19613.08	1.63
2038–39	3.18	2.93	-0.25	19613.08	1.62
2039–40	3.19	2.93	-0.27	19613.08	1.63
2040–41	3.20	2.93	-0.27	19613.08	1.63
2041–42	3.20	2.93	-0.28	19613.08	1.63
2042–43	3.20	2.93	-0.28	19613.08	1.63
2043–44	3.21	2.93	-0.28	19613.08	1.63
2044–45	3.21	2.93	-0.28	19613.08	1.64
2045–46	3.16	2.93	-0.23	19613.08	1.61
2046–47	3.17	2.93	-0.24	19613.08	1.62
2047–48	3.18	2.93	-0.25	19613.08	1.62
2048–49	3.15	2.93	-0.22	19613.08	1.61
2049–50	3.15	2.93	-0.22	19613.08	1.61
2050–51	3.16	2.93	-0.23	19613.08	1.61

HR, Head Regulator.