

The Indira Gandhi Nahar Pariyojana (IGNP): Importance in Jaisalmer

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The Indira Gandhi Nahar Pariyojana (IGNP)—originally known as the Rajasthan Canal Project—is the ultimate geographic and socio-economic lifeline of Western Rajasthan. While it is fundamentally a monumental water-engineering project, its physical transformation of the Thar Desert lays the structural groundwork that makes community development, literacy, and modern e-learning initiatives possible in deep rural pockets.



Fig. 1: Irrigation canal in the arid region

The Geographic Footprint of IGNP

The canal is a massive human *engineering* effort designed to steer water from the confluence of the Sutlej and Beas rivers in Punjab deep into the hyper-arid zones of Rajasthan:



Fig. 2: Canal water flow in the arid zone

- **Stage I:** Enters Rajasthan through Hanumangarh and runs down to Bikaner.
- **Stage II:** Extends the main canal from Bikaner through Mohangarh in Jaisalmer, reaching all the way to its tail end at Gadra Road in Barmer.

How IGNP Intersects with the Regional E-Learning Dynamic

While the canal brings physical water, it directly enables the structural conditions required for digital education and internet accessibility to penetrate the desert:

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- **From Nomadic** Dispersal to Permanent Settlements: Before the canal, deep-desert communities in Jaisalmer and Barmer were forced into highly volatile, migratory pastoral lifestyles to survive intense droughts. The canal stabilized these populations into permanent villages (chak settlements). Settled agrarian communities allow for stable school infrastructure, physical power grids, and static cellular towers, which are the structural backbones of virtual learning.
- **Socio-Economic** Capital for Tech Adoption: The shift from subsistence desert farming to highly lucrative cash crops (like mustard, cotton, and groundnuts) heavily boosted household incomes. This economic surplus directly influences a family's ability to purchase smartphones, pay for data packs, and invest in secondary digital education for their children.
- **Digital Extension Services** (Agritech E-Learning): The canal brought major environmental changes, including soil salinity shifts and water logging concerns. To fight these ecological side effects, digital training modules have become critical. Academic and government bodies rely on information communication technologies (ICT) to run virtual education camps for farmers, teaching them data-driven irrigation techniques and sustainable land management directly via regional smart phones.

Under agro-climatic condition of Jaisalmer, adoption of new technology crop /fruit or livestock is quite less as compared to other part of the country. Painkra, S.K (2005). There is a huge technology gap exists in the present agricultural systems because of less adoption of improved technologies. Barodia, A.R. (2005) For increasing production and productivity of crop /fruit or livestock, it is essential to fill this gap through making technology transfer more efficient and effective Study on the IGNP will provide the focus on the scenario of the area under the IGNP earlier in this area whole land was divided in irrigated fields (Rainfed fields),tube ell irrigated fields and khadins Deotale, S. L. (1994). To provide irrigation water to the farmers this canal has been constructed in these border districts so that this barren land of the desert could be converted in the

cultivable land and the socio-economic status of the farmers could be raised the whole western Rajasthan desert could be converted in the cultivable area. Diwan, Y.B. (2000). Earlier farmers of this region were taking single rain fed crops and less number of heard and very less area under the forestry after the canal almost all area of the Mohangarh has come in the irrigated area. Dongardive, V.T. (2002). Because of the canal farmers are able to take 2 -3 crops on the same piece of land and other than crops farmers are also taking others crops such as pomegranate, Ber and date palm diggis also came into existence and number of cows and goats and sheep also has been increased this will increased the production and productivity of the region. Kushwaha C.L, (2004). Impact of the IGNP canal have been Judged in terms of increase in the income, social status knowledge, adoption, skill and attitude of the farmers After measurement of the adoption gap it will be easier for the farmers and researchers to move the farmers from the laggards to the early adopters Kushwaha C.L, (2004). Based on this study it will be easier to recommend the exact technology based on the bottom up approach and problem and situation specification technology for the researcher and the policy makers. Barodia, A.R. (2005).