



The Issues of Micro-Irrigation Sector

This article is based on “[An SOS Call from the Indian Micro-Irrigation Industry](#)” which was published in Livemint on 19/11/2021. It talks about issues faced by the micro-irrigation industry.

Water is a scarce natural resource and the major requirement in the agricultural sector. The efficient use of available water for [irrigation](#) is a major challenge. Technological innovations such as [micro-irrigation](#) play an essential role in water-resource management.

Despite several benefits and widespread acknowledgement of the critical role of micro-irrigation in the sustainability of Indian agriculture, the industry that provides the wherewithal for it, is currently struggling to survive.

Price controls and bureaucratic delays in scheme enrolment, lack of field reviews and the delays in reimbursement of subsidies, etc, have pushed this industry to the brink of collapse despite its importance.

Water Availability & Micro-Irrigation in India

- **Declining Water Availability:** India first **entered the league of water-deficient countries in 2011.**
 - India's **per capita water availability** is estimated at **1,428 kilolitres per year.**
 - A nation with annual water availability of below 1,700 kilolitres per head is considered water deficient.
 - It has **one of the fastest shrinking water pools** among G-20 economies.
- **About Micro-Irrigation:** It is a modern method of irrigation by which water is irrigated through drippers, sprinklers, foggers and by other emitters on the surface or subsurface of the land.
 - **Sprinkler irrigation and drip irrigation** are the commonly used micro-irrigation methods.
- **Significance of Micro-Irrigation:**
 - Micro-irrigation **ensures water use efficiency** as much as 50- 90%.
 - **Water savings** in comparison with flood irrigation are to the tune of 30-50%, with an average of 32.3%.
 - **Electricity consumption falls** significantly.
 - Adoption of micro-irrigation **results in savings on fertilizers.**
 - **Increase in the average productivity** of fruits and vegetables.
 - It leads to overall **enhancement of farmers' income.**

Challenges Faced by Micro-Irrigation Industry

- **Slower Adoption Pace for Drip Method of Irrigation (DMI):** The **Task Force on Micro-Irrigation in India (2004)** estimated India's total drip irrigation potential stands at 27 million hectares.
 - However, the area under drip-irrigation accounts for a mere 4% of gross irrigated area and about 15% of its total potential (2016-17).

- Moreover, the adoption of DMI is also concentrated only in a few States.
- **Issues Associated to Irrigation-Related Schemes:**
 - **Irresponsibility by State Governments:** In most Indian states (with Gujarat and Tamil Nadu being the major exceptions), the **scheme is operational only for a few months in a year.**
 - Despite the availability of funds, scheme applications are processed only at the end of a financial year, done typically to achieve pre-set targets in what is famously known as the '**March rush**'.
 - As a result of this narrow window, **only a handful of farmers can apply.**
 - **Delays in the Reimbursement of Subsidies:** Unlike other subsidies that are directly transferred to beneficiaries, those for installing drip irrigation systems are **transferred to vendors only after due diligence.**
 - There is **no fixed timeline for the inspection and testing** of the installed system for transferring subsidies.
- **Financial Difficulties:** The farmers often face **difficulty in getting necessary support from financial services.**
 - It was reported that a lower adoption rate for micro-irrigation was due to the reduction in budget during the period 2013-16.
- **Availability of Power:** The main input for an irrigation system is energy, and for large scale projects, only **electricity is a viable source** which, despite having respective welfare schemes in place, **is still beyond the reach of every farmer.**

Way Forward

- **Role of Administration: Setting a timeline for each stage,** from an application by a farmer to the execution and payment disbursement and **strengthening the government's monitoring mechanism** by insisting on a periodic review of applications, approvals, work orders and actual installations.
 - **Deploying direct benefit transfers for subsidy sums** for micro-irrigation to go straight into the bank accounts of farmers.
 - Also, farmers should be made able to **avail the benefits of such welfare schemes in accordance with their crop cycles** or sowing patterns.
- **Expanding the Scope of Micro-Irrigation:** The **capital cost** required for the drip-irrigation method should be **brought down substantially.**
 - A special **subsidy programme may be introduced for water-intensive crops** like sugarcane, banana and vegetables.
 - A **differential subsidy scheme for water-scarce and water-abundant areas** can also be introduced.
 - Currently, water from surface sources (dams, reservoirs, etc) is not used for DMI. A **share of water from each irrigation project can be allocated** only for DMI.

Conclusion

The future revolution in agriculture will come from precision farming. Micro-irrigation can, indeed, be the stepping stone for achieving the goal of making farming sustainable, profitable and productive.

However, '**per drop more crop**' can only be achieved by deploying advanced and efficient irrigation technologies, and these can only be developed if a wholesome business environment is ensured by eliminating delays, discretion and red tape.

Drishti Mains Question

Discuss the significance of micro-irrigation in sustainable agriculture and the steps that can be taken to empower the micro-irrigation sector of India.

