



## 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.

